

INDEST-AICTE Consortium: Status and Future Challenges

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Abstract

An attempt has been made to determine the present status of INDEST-AICTE Consortium. This article briefs about the activities of INDEST-AICTE Consortium, objectives, operation and governance of Consortium. It also explains how INDEST-AICTE consortium is growing-up. This article elaborate about various full-text and bibliographical electronic resources being subscribed by the consortium, selection and procurement of electronic resources, services and activities of INDEST-AICTE Consortium. Issues and challenges faced by the consortium are also described in detail.

Keywords: INDEST-AICTE Consortium, e-Journals, Consortia.

1. Introduction

Recent past has witnessed a volumetric growth of documents in print as well as in electronic format. Because of this growth, no library can procure process or store the entire documents that the library users demand. To solve this problem library cooperation started long ago, such as library network, Inter Library Loan (ILL), document delivery library consortia etc, which are internationally accepted, but at present the more accepted system of resource sharing is library consortia that have come into existence with a wide coverage. Some of the important consortia are FORSA, CSIR Consortium, IIM Consortium, MCIT Library Consortium, UGC-Infonet Digital Library consortia and INDEST-AICTE Consortium. The "Indian National Digital Library in Engineering Sciences and Technology (INDEST) Consortium" was set-up in 2003 by the Ministry of Human Resource Development (MHRD) on the recommendation of an Expert Group appointed by the Ministry. The IIT Delhi has been designated as the Consortium Headquarters to coordinate its activities. The Consortium enrolls engineering and technological institutions as its members and subscribes to electronic resources for them at discounted rates of subscription and favourable terms and conditions. The Ministry provides funds required for subscription to electronic resources for 48 centrally-funded Government institutions including IITs, IISc Bangalore, NITs, ISM, IIITs, IIMs, NITTTR's and few other institutions that are considered as core members of the Consortium. The benefit of consortia-based subscription to electronic resources is not confined to its core members but is also extended to all educational institutions under its open-ended proposition. 60 Govt. / Govt.-aided engineering colleges are provided access to selected electronic resources with financial support from the AICTE and 1268 engineering colleges and institutions have joined the Consortium under its self-supported category. The total number of members in the Consortium has now grown to 1376. The Consortium was re-named as INDEST-AICTE Consortium in December

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2005 with the AICTE playing a pivotal role in enrolling its approved engineering colleges and institutions as members of the Consortium for selected e-resources at much lower rates of subscription.¹

2. Objectives of INDEST-AICTE Consortium

The INDEST-AICTE Consortium has the following objectives:

- i. to subscribe electronic resources for the members of the Consortium at highly discounted rates of subscription and at the best terms and conditions;
- ii. to extend the benefit of consortia-based subscription beyond the core members to other engineering and technological institutions;
- iii. to impart training to the users and librarians in the member institutions on subscribed electronic resources with an aim to optimise the usage of subscribed electronic resources;
- iv. to find more avenues of cooperation and interaction amongst member libraries;
- v. to increase scientific productivity of member institutions in terms of quality and quantity of publications.
- vi. to help new engineering institutes and colleges to make the right choice of e-resources; and
- vii. to find more avenues of co-operation and interaction with other consortia.

3. Operation and Governance of the Consortium

The Consortium operates through its headquarters set-up at the IIT Delhi under a National Steering Committee consisting of members from amongst beneficiary institutions under the Chairmanship of Director, IIT Delhi with Chairman, AICTE as its Co-Chair. A National Review Committee has also been set-up under the Chairmanship of Joint Secretary (Technical Education) with an overall responsibility for making policies, monitoring the progress, coordinating with UGC and AICTE for promoting the activities of the Consortium.

4. Membership

The INDEST-AICTE Consortium has the following three categories of Members:

- 4.1. Core Member Institutions:** 48 centrally-funded Government institutions including IITs, IISc, NITs, ISM, IISERs, IIMs, NITTTRs, IIITs and few other institutions are core members of the Consortium. The Ministry provides funds required for providing differential access to electronic resources for its core members through the Consortium Headquarters at the IIT Delhi.
- 4.2. Members with Financial Support from the AICTE:** 60 Govt. / Govt-aided institutions have become member of the Consortium with financial support from the All India Council for Technical Education (AICTE). The AICTE is actively considering provision of access for selected e-resources to all Govt. / Govt. aided institutions.
- 4.3. Self-supported Engineering Colleges and Institutions:** The Consortium, being an open-ended proposition, invites AICTE approved and UGC-affiliated

institutions to join hands with the leading engineering and technological institutions in India and share the benefits, it offers in terms of lower subscription rates and better terms of agreement with the publishers. 1268 engineering colleges and institutions have joined the Consortium under its self-supported category.

Membership statistics of INDEST-AICTE Consortium

(As on 15th June 2011)

Year	MHRD Institutes	AICTE Institutes	Self-Supporting Institutes	Total
2003	37	-	-	37
2004	37	44	74	155
2005	37	44	90	171
2006	37	60	515	612
2007	42	60	672	774
2008	48	60	782	890
2009	48	60	993	1101
2010	48	60	1100	1108
2011	48	60	1268	1376

It has been observed from the above table that INDEST-AICTE Consortium membership has grown steadily from last few years. INDEST-AICTE Consortium is growing day by day; it becomes very important Consortia in India as well as in Asia. Under self-supporting category it has increased from 74 on 2004 to 1376 on June 15, 2011. The breakup of INDEST-AICTE Consortium membership is given in above table.

5. Selection and procurement of Electronic Resources

It requires considerable care, effort and judicious involvement of the members. The Expert Group appointed by the Ministry initially selected and evaluated the e-resources being subscribed by the Consortium. New electronic resources are added based on the demands from the member institutions after due evaluation and approval by the National Steering Committee. The electronic resources subscribed by the INDEST-AICTE Consortium were selected based on the following criteria:

- i. Well-established multi-disciplinary resources with broad coverage were preferred over highly specialized sources targeted to specialists;
- ii. The electronic resources already on subscription in the beneficiary institutions were preferred over those which are not being used in any of the beneficiary institutions;
- iii. Resources that are 'electronic-only' were preferred over those that are print-based unless completely unavoidable;
- iv. Resources that are very important but highly cost-intensive were preferred over those which are less important or less-used but low cost; and
- v. Resources where electronic versions are made available free on subscription to their print versions were avoided as far as possible.

6. Services and Activities of INDEST-AICTE Consortium

The INDEST-AICTE Consortium is not just a buying club for electronic resources. Besides purchase of electronic resources, there are several other activities that the Consortium performs to achieve optimal utilization of electronic resources subscribed by it. Some of the important services and activities of the Consortium include:

6.1. E-resource Purchasing

Co-operative subscription to electronic resources is the principal task of the INDEST-AICTE Consortium with focus on providing consortium-wide access to electronic resources to support education and research in core subject areas of its members. The Consortium is responsible for carrying out negotiations with publishers and aggregators of electronic resources for getting better deals. It also negotiates terms of licenses and agreements with the publishers. The major terms of reference that the Consortium takes into consideration while negotiating with the publishers includes:

- Lowest rates of subscription for all member institutions;
- Access to archival backfiles along with current subscription;
- Archival backup or perpetual access to e-resources;
- Cap on annual increase in rates of subscription;
- Print-independent (preferable) subscription to e-resources with deep discount on print
- Print-dependent subscription to e-resources with cap on annual increase on rates of subscription to print; and
- Better terms of license for access to e-resources.

6.3. Training of Users and Library Staff

The INDEST-AICTE Consortium has signed tripartite agreements with the publishers of electronic resources and with their local vendors as third party responsible for providing training on resources at various member institutions. All institutions have been requested to take benefit of this arrangement and organize training programmes on various resources within their institutions. The INDEST-AICTE Consortium holds extensive training programme for the benefit of Library staff members from various institutions. Besides, all IITs, IISc, IIMs and NITs are also assigned to conduct training programmes on themes decided by the National Steering Committee at regional level /national level.

6.4. Technology Support to Member Institutions

INDEST-AICTE Consortium has geared itself to provide consultancy services to its member institutions, especially NITs in library computerization, digitization and in the development of computer and network infrastructure.

6.5. Shared Technology Systems

As a subscriber to multiple numbers of electronic resources, the INDEST-AICTE Consortium is considering technology that enables federated searching of resources across all subscribed resources. The Consortium is currently evaluating commercial

and open source technological options that are available in the market place. Consortium is also helping the member institutions to develop and maintain the digital library.

6.6. Joint Archives and Storage Facilities

Establishing archival centres for electronic resources subscribed through the INDEST-AICTE Consortium has been identified as one of the important activities. The INDEST-AICTE Consortium is planning to establish archival centres for different resources at different institutions.

7. Electronic Resources being subscribed by the Consortium Full-Text E-Resources

Following Electronic Resources being subscribed by the Consortium Full-Text E-Resources¹:

7.1.1 ABI / Inform Complete (<http://www.proquest.umi.com>) : ABI / Inform is a world-renowned database of full text journals on business, economy and management providing a comprehensive coverage on various micro as well as macro economic aspects of various economies of the world. It covers nearly 4,240 journals in business, management and social sciences with around 3,100 of them in full-text and remaining 1,140 at the abstract level with coverage dating back to 1923.

7.1.2 ACM Digital Library (<http://portal.acm.org/portal.cfm>): The ACM Digital Library (DL) is a complete collection of all of ACM's publications, including ACM journals, conference proceedings, magazines, newsletters, and multimedia titles. The ACM DL contains the largest and most complete full-text archive of articles on computing available today, consisting of 2.0+ Million Pages of full-text articles and 2,72,000 Articles.

7.1.3 AIP/APS Journals : American Institute of Physics is a not-for-profit corporation chartered in 1931 to provide publishing and distribution services for scientific and technical societies. AIP is the publisher of 12 journals, two magazines and the AIP Conference Proceedings series, many of which have the highest impact factors in their category. AIP's online publishing platform, Scitation, currently hosts more than 16,00,000 articles from 185 publications of 30 scholarly publishers.

7.1.4 ASCE Journals Online (<http://www.pubs.asce.org/journals/jrns.html>) : American Society of Civil Engineers (ASCE) represents more than 139,623 members of the civil engineering profession worldwide, and is America's oldest national engineering society. It publishes 32 journals, periodicals and transactions that cover a comprehensive range of the civil engineering profession. ASCE contains over 1,70,000 bibliographic records of everything ASCE has published since 1970.

7.1.5 ASME Journals Online (<http://www.asme.org/pubs/journals/>) : Founded in 1880 as the American Society of Mechanical Engineers, ASME is the premier professional membership organization for more than 127,000 mechanical engineers and associated members worldwide.

7.1.6 ASTM Standards + Digital Library(www.astm.org/digitallibrary) : ASTM International (ASTM), originally known as the American Society for Testing and Materials, is one of the largest voluntary standards development organizations in the world-a trusted source for technical standards for materials, products, systems, and services. Known for their high technical quality and market relevancy. It has a collection of more than 12,000 test methods and standards. ASTM has recently introduced all its publications online as a digital library. Now thru Digital Library you can have instant access to: 1000+ Special Technical Publications, 50+Manuals and Monographs and 10,000+Journal Articles.

7.1.7 Capitaline - (http://www.capitaline.com/intranet/INDEST-AICTE_consortium.htm): Capitaline is a database of 13,000 listed and unlisted companies, classified under more than 300 industries, alongwith powerful analytic tool. It gives extensive financial and non-financial information on each of the companies. Balance sheet, profit & loss, consolidated financial data, segment data, and stock prices, board of directors. Industry (NIC) and product (ITC) classifications, corporate actions and Director's reports run to over 10 years. Being marketed since 1986, CapitalinePlus has the USP of covering the largest number of data points (1,400+) per company. It has powerful screener module to identify companies satisfying varying criteria and trends. It is served on CD-ROM, with optional online access through IP addresses.

7.1.8 CRIS INFAC Industrial Information - (<http://www.crisil.com/>) : CRIS INFAC Industry Information Service presents a detailed and comprehensive analysis of the current trends and the long-term performance outlook on 45 industries in India. It includes the evolution of an industry, the regulatory environment, cost structures, nature and extent of competition, global trends along with statistical information on capacities, production, imports-exports, domestic and international prices, consumption patterns. It also contains monthly review, quarterly review and annual review of the industry.

7.1.9 EBSCO Business Source Complete - (<http://www.ebscohost.com/>): Business Source Complete is the scholarly business database, providing the leading collection of bibliographic and full text content. In addition to the searchable cited references provided for more than 1,200 journals, BSC contains detailed author profiles for the 40,000 most-cited authors in the database.

7.1.10 Elsevier's Science Direct - (<http://www.sciencedirect.com/>): The Science Direct offers a rich electronic environment for research journals, bibliographic databases and reference works. The database offers more than 2500 scientific, technical and medical peer-reviewed journals, over 75 million abstracts, over 9.65 million full-text scientific journal articles, an expanding suite of bibliographic databases and linking to another one million full-text articles via CrossRef to other publishers' platforms.

7.1.11 Emerald Management Xtra - (<http://www.emeraldinsight.com/>): Emerald Management Xtra is a combination of Emerald Full text database and Management reviews from leading 300 world's best management & business Journals. It provides

access to full-text of 95 to 150 journals depending on option one choose. It has access to over 85,000 full text management articles of the highest caliber.

7.1.12 Euromonitor (GMID) - (<http://www.gmid.euromonitor.com>): The Global Market Information Database (GMID) from Euromonitor International provides key business intelligence on countries, companies, markets and consumers. It is an integrated online information system covering over 350 markets and 207 countries.

7.1.13 ICE + Thomas Telford - (<http://www.atypon-link.com/action/showPublisherJournals?code=ITELF>): Thomas Telford is the knowledge business of the Institution of Civil Engineers, creating specialist products and services for the civil engineering and construction markets.

7.1.14 IEC Standards (Intranet Version): The International Electrotechnical Commission (IEC) is a not-for-profit, non-governmental international standards organization that prepares and publishes International Standards for all electrical, electronic and related technologies – collectively known as "electrotechnology". IEC standards cover a vast range of technologies from power generation, transmission and distribution to home appliances and office equipment, semiconductors, fibre optics, batteries, solar energy, nanotechnology and marine energy as well as many others.

7.1.15 IEEE / IET Electronic Library Online (IEL) - (<http://ieeexplore.ieee.org/>): The IEEE/IET Electronic Library (IEL) is industry's most powerful engineering reference resource. It provides unparalleled full-text access to publications from Institute of Electrical and Electronics Engineers (IEEE) and the Institution of Engineering and Technology (IET). It includes 126 journals from IEEE, 21 journals from IET, magazines, transactions and 850 + conference proceedings as well as active IEEE standards – over 1 million documents in all. More than 12,500 new titles are added per month. It provides access to 22,72,351+ full-text documents and more than three million full-page PDF images from backfiles from 1988 onwards and selected titles from 1950 onwards including all original charts, graphs, diagrams, photographs and illustrative material.

7.1.16 IET Digital Library - (<http://www.ietdl.org/>): IET (Formerly the IEE) is a world renowned society publish high quality Indexed Journals and Databases such as Inspec. The IET Digital Library provides INDEST members access to the entire IET publications. The Digital Library hosts 23 Journals, the New E&T Magazine and archive of 7 magazines and entire conference proceeding and seminar digests for IET.

7.1.17 Indian Standards (Intranet Version): The Intranet version of Indian Standards on hard disc and CD ROM offered through the INDEST Consortium includes the entire collection of 19,000 odd Indian Standards. The search engine allows you to identify, view and print Indian Standards by Standard Number, Standard Title, Text in the Scope of the Standards and Search-in-Search (Nested search). New and revised standards can also be searched.

7.1.18 INSIGHT (<http://www.insight.religaretechnova.com/>) : Insight is a product that has evolved through perpetual gathering of financial data since 1988. It is a single pool of database of Stock Market, Listed Companies, Mutual Fund, IPO, Derivatives, World Indices and Forex. For two decades, various technological tools have been developed and deployed to filter, refine, transform and enrich the raw data into financial interpretations.

7.1.19 McGraw-Hill's Access Engineering (Formerly DEL) - (<http://www.accessengineeringlibrary.com/>) : AccessEngineering is a redesign of the online engineering resource, formerly known as McGraw-Hill's Digital Engineering Library. Digital Engineering Library is a collection of more than 4,000 articles from renowned reference books published by McGraw-Hill including 255 outstanding books classic reference works such as Marks' Standard Handbook for Mechanical Engineers, Perry's Chemical Engineers Handbook, Standard Handbook for Electrical Engineers Roark's Formulas for Stress and Strain with new title added weekly.

7.1.20 Nature - (<http://www.nature.com/>): Nature is the world's foremost weekly scientific journal and is the flagship journal for Nature Publishing Group (NPG) launched in 1869. NPG publishes journals and online databases across the life, physical and applied sciences and, most recently, clinical medicine. Content encompasses daily news from award-winning journalists, expert opinion and practical methodology, and more high impact research and reviews than any science publisher. Over 30 journals are published in association with prestigious academic societies. After the successful launch of nature archives from 1987 to 1996 in August 2003, NPG has also digitalized its archives dating back to 1950 to provide online access to original papers previously available in print only.

7.1.21 OSA :Optics Infobase - (<http://www.opticsinfobase.org/>) : Optics InfoBase is OSA's online library for OSA flagship journals and for partnered and co-published journals. It contains recent proceedings from OSA conferences. The Optics InfoBase has a variety of simple and advanced search and browse features for locating articles. It offers a growing number of tools for creating custom alerts and RSS feeds, linking to related contents, exporting citations, and much more.

7.1.22 ProQuest Science (formerly ASTP) - (<http://www.il.proquest.com/pqdauto>): Proquest Science Journals (Formerly "Applied Science & Technology Plus") is a comprehensive full-text database of applied and general science subject area, which provides detailed, in-depth coverage and powerful searching of the leading scholarly journals and trade publications in the field. Proquest Science Journals is a growing collection which currently offers 660 titles including 540 titles in full-text with coverage dating back to 1986. In full-text format, researchers have access to all the charts, diagrams, graphs, tables, photos, and other graphical.

7.1.23 SCOPUS - (<http://www.info.scopus.com/>): Scopus, launched in November 2004, is the largest abstract and citation database containing both peer-reviewed research literature and quality web sources. With over 18,000 titles from more than 5,000 publishers, Scopus offers researchers a quick, easy and comprehensive resource

to support their research needs in the scientific, technical, medical and social sciences fields and, more recently, also in the arts and humanities.

7.1.24 Springer Link (<http://www.springerlink.com/>): SpringerLink is one of the world's leading interactive databases for high-quality STM journals, book series, online reference works, ebooks, and the online archives collection. SpringerLink is a powerful central access point for researchers and scientists. The SpringerLink Online Journal collection includes more than 2,107 peer-reviewed journals, comprising of more than 1000,000 individual documents. The Consortium subscribes to 1,495 journals for IITs and IISc (Level I), 1,300 journals for NITs and other core Institutions and 1,300 & 520 journals for the self supported category.

7.1.25 Wiley InterScience (Cross Sharing) - (www.interscience.wiley.com) : Wiley InterScience is a leading international resource for quality content promoting discovery across the spectrum of scientific, technical, medical and professional endeavours. More than half of Wiley's journals on Wiley InterScience are digitized back to Volume 1, Issue 1 as part of the development of the journal backfile initiative.

7.2 Bibliographic Databases

Following Electronic Resources being subscribed by the Consortium Bibliographic E-Resources¹:

7.2.1 INSPEC on EI Village (<http://www.ei.org/ev2/home>): INSPEC, from the the Institution of Engineering and Technology (IET), is the world's leading bibliographic database providing coverage of scientific and technical literature in the fields of physics, electronics, electrical engineering, and computer science. Primary coverage is of journal articles and papers presented at conferences, significant books, technical reports, and dissertations are also included in the database consisting of 8 million records. Sources include more than 3,000 journals and more than 2,000 conference proceedings, books and reports. Over 4,00,000 new records are added to the database annually.

7.2.2 J-Gate Custom Content for Consortia (JCCC) (<http://jcccindest.informindia.co.in/>): The JCCC is a virtual library of journal literature created as customized e-journals access gateway and database solution for the INDEST-AICTE Consortium. It acts as one-point access to 6,327+ journals subscribed currently by all the IITs and IISc and available online.

7.2.3 MathSciNet - (<http://www.ams.org/mathscinet/>): MathSciNet is an electronic publication offering access to a carefully maintained and easily searchable database of reviews, abstracts and bibliographic information for much of the mathematical sciences literature. MathSciNet contains over 2 million items and over 10,00,000 direct links to original articles. Bibliographic data from retrodigitized articles dates back to 1800s. Reference lists are collected and matched internally from over 400 journals, and citation data for journals, authors, articles and reviews is provided.

7.2.4 SciFinderScholar: (<http://www.cas.org/SCIFINDER/SCHOLAR/index.html>; access through a Z39.50 Client to be installed on each PC) : SciFinder is a research

discovery tool that allows students and faculty to access a wide diversity of research from many scientific disciplines, including biomedical sciences, chemistry, engineering, materials science, agricultural science, and more. It is a Z39.50 Windows-based interface that provides easy access to the rich and diverse scientific information contained in the CAS databases including Chemical Abstracts from 1907 onwards. The SciFinder Scholar offers a variety of pathways to explore CAS databases as well as MEDLINE. It has references from more than 10,000 currently published journals and patents from more than 59 patent authorities

7.2.5 Web of Science - (<http://isiknowledge.com>): The Web of Science provides seamless access to current and retrospective multidisciplinary information from approximately 8,700 of the most prestigious, high impact research journals in the world. It has access to the Science Citation Index (1900-present), Social Sciences Citation Index (1956-present), Arts & Humanities Citation Index (1975-present), Index Chemicus (1993-present), and Current Chemical Reactions (1986-present), plus archives 1840 - 1985 from INPI.

8. Electronic Resources and Number of Subscribing Institutions

The Consortium subscribes to 24 full-text e-resources and 6 bibliographic databases. The table given below and Figure 1 and 2 depicts e-resources and number of subscribing institutions.

Table 1: Full-Text E-Resources and Number of Subscribing Institutions (As 15th June 2011)

Name of E-Resources	Core	AICTE	Self-Supported	Total
ABI/ Inform	15	0	10	25
ACM Digital Library	39	0	74	113
ASCE	32	36	109	177
ASME	34	37	237	308
ASTM Standards + Digital Library	28	0	9	37
Capitaline	13	0	0	13
CRIS INFAC	6	0	0	6
DEL	0	0	63	63
EBSCO's BSC	13	0	3	16
Emerald Xtra	13	0	18	31
Euromonitor	13	0	0	13
ICE Thomas Telford	8	0	0	8
IEC Standards	8	0	0	8
IEL Online	44	60	552	656
IET Digital Library	0	0	8	8
Indian Standards	29	0	5	34
INSIGHT	6	0	0	6
Inform Pub Suite			1	1
Nature	37	0	0	37
INFOTRAC Engineering Collection			2	2
OSA (Optics Infobase)	8	0	3	11
ProQuest Science	22	2	11	35
Science Direct	34	0	219	253

Springer	36	0	143	179
Wiley InterScience	6	0	0	6
AIP/APS	13	0	0	13

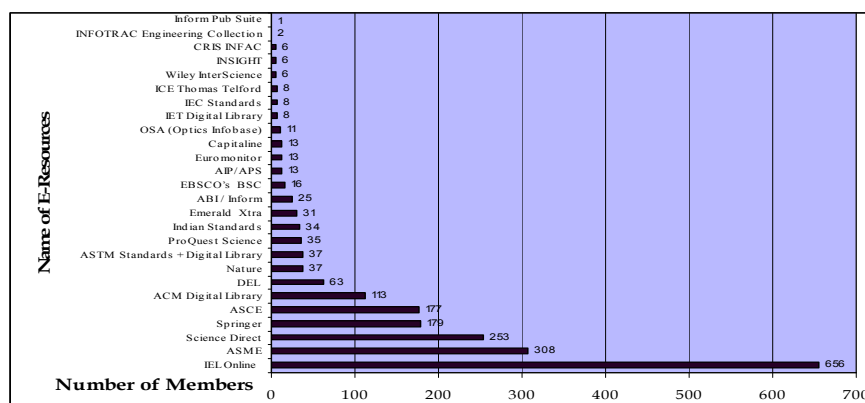


Fig. 1: Full-text E-resources and Total Number of Subscribers

Table 2: Bibliographic Database and Number of Subscribing Institutions
(As on 15th June 2011)

Name of Bibliographic Database	Core	Self-Supported institutions	Total
Compendex	8	0	8
INSPEC	8	0	8
JCCC	47	0	47
MathSciNet	13	16	29
SciFinder Scholar	8	0	8
Scopus	8	0	8
Web of Science	8	0	8

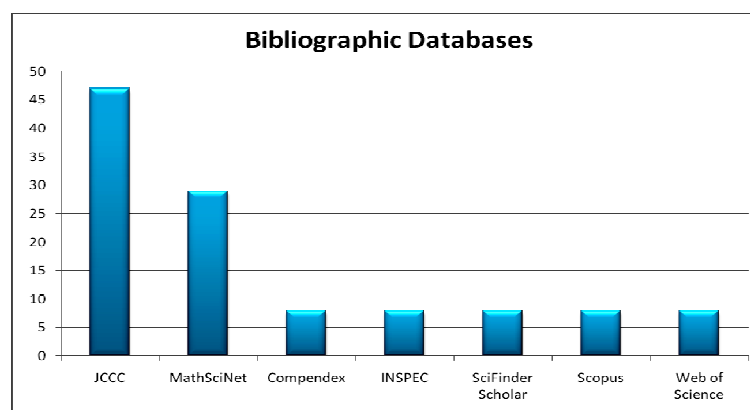


Fig. 2: Bibliographic Databases and Total No. of Subscribers

9. Strategies for Effective Implementation :

Considering the fact that funds required for subscription to electronic resources for most of the institutions are met by the Government, it is inevitable to take steps to ensure proper utilization of resources in all member institutions. Some of the important steps taken in this direction are as follows:

9.1. Promoting Use of Resources: Several steps have been taken to promote usage of subscribed electronic resources amongst the member institutions. The Consortium maintains a comprehensive Web site on its activities, services and resources. Besides, training programmes and annual meets, both at institute level and consortium level, brochures and user's manual prepared, printed and distributed amongst member institutions. Moreover, soft copies of these tutorials are also made available through the INDEST-AICTE Consortium Web site. The Web site also provides links to web-based online tutorials available for these resources.

9.2. Usage Monitoring: Most publishers maintain detailed usage statistics for resources offered by them to the INDEST-AICTE Consortium. Comparative usage statistics for member institutions is obtained from the publishers and is made accessible to the member institutions on the INDEST-AICTE Consortium Website through an interface called e-RAMS (Electronic Resource Access Management System). Institutions with low usage are requested to optimize their usage.

9.3. INDEST-AICTE Consortium User's Group: With an aim to optimise usage of electronic resources made available through the Consortium, each member institution is required to constitute a Consortium Users Group Committee, which may be a sub-committee of the existing Library Committee. The Consortium User Groups are required to meet once in a month to review the usage and associated problems.

9.4. INDEST-AICTE Consortium Users Convention : It is obligatory for each institution to organize a Users Convention in their respective institutions for electronic resources accessible to them through the Consortium for the benefit of their user community. Several member institutions are regularly organizing user conventions for electronic resources accessible to them through the Consortium.

9.5. Copyright and IPR Issues: The INDEST-AICTE Consortium Website provides information on "Licenses and Fair Use" to sensitize users as well as librarians on issues of licenses and agreements that the Consortium signs with the publishers. The website provides details on what authorized users can do and what they cannot do. While most of the publishers allow inter-library loan, electronic delivery of articles are not allowed.

9.6. Reliability of Connectivity : Availability of adequate Internet connectivity and bandwidth are crucial for optimal use of e-resources subscribed by the Consortium for its member institutions. The ministry has taken steps to increase bandwidth and connectivity available to each centrally-funded institution.

9.7. ICT Requirement for Accessing Electronic Resources : A minimum level of hardware and software infrastructure is a pre-requisite for a user or subscribing

institution desirous of subscribing e-resources so as to achieve efficient and effective interaction with subscribed resources. The INDEST-AICTE Consortium Website and Compendium for member institutions provides recommendations on ICT infrastructure requirements for accessing electronic resources.

10. Cross Sharing of E-Resources : INDEST-AICTE Consortium and UGC-INFONET Digital Library Consortium, INFLIBNET Centre

A new MHRD funded project has been initiated, known as N-LIST, jointly executed by the INDEST-AICTE Consortium, IIT Delhi & UGC-INFONET Digital Library Consortium, INFLIBNET Centre, Ahmedabad under centrally sponsored scheme of National Mission on Education through Information and Communication Technology of MHRD, Govt. of India. The project provides cross-subscription to eResources subscribed by the two Consortia, i.e. subscription to INDEST-AICTE resources for universities and UGC INFONET resources for technical institutions; and access to selected eResources to colleges.

The National Library and Information Infrastructure for Scholarly Content (N-LIST) is being jointly executed by the UGC-INFONET Digital Library Consortium, INFLIBNET Centre and the INDEST-AICTE Consortium, IIT Delhi under the overall guidance of a National Steering Committee (NSC) of the two Consortia. Decisions on policy issues are taken in the joint meeting of the NSCs of the two Consortia under the overall policy direction of the National Mission on Education through ICT. The Joint Committee of the NSC and sub-Committees appointed by it take decisions on e-resources to be subscribed from various publishers and their accessibility to beneficiary institutions. The INFLIBNET Centre acts as a monitoring for implementation, monitoring and execution of the entire programmes. Besides National Steering Committees, a Joint Negotiation Committee, with representation from both the Consortia, is constituted for negotiating subscription rates to e-resources with publishers.

The following four sets of institutions are benefiting from N- LIST project ²:

- i. Universities covered under Phase-I of the UGC-INFONET Digital Library Consortium can now access 'Web of Science'.
- ii. IITs, IISc, IISERs and selected NITs (i.e. core members of the INDEST-AICTE Consortium) can now access selected e-resources namely 'Annual Review, Project Muse and Nature'.
- iii. 6,000 Government and government-aided colleges covered under Section 12B of the UGC Act can now access selected electronic resources including electronic journals, electronic books and bibliographic databases. These resources include more than 2,100 e-journals and 51,000 e-books.
- iv. College not covered under the 12B Section of the UGC Act, can benefit from the N-LIST Programme by joining as an Associate. These colleges are required to pay a fixed amount toward subscriptions and annual membership fee.

11. INDEST-AICTE Consortium : Issues and Challenges

Following are some of the Issues and Challenges faced by INDEST-AICTE Consortium :

11.1 Funding and Increase in Number of Member institutions: Funding from MHRD is not adequate because number of core institutions (8 new IITs, 5 IISERs established, New IIMs, New NITs added) have increased substantially.

11.2 Price Rise by Publishers: The price rise in general is 8-12% for publishers in foreign currency but consortium has a cap of 3-5% price rise. The fluctuation in the foreign currency has impacted consortium budget in Indian rupees.

11.3 Maintenance of Print Base : Publishers like Elsevier Science Direct, Springer Verlag and others insist on maintaining print base to the tune of subscription amount at the time of joining of the consortia and charge additional 9-10 % for providing electronic access.

11.4 License Agreement Issues: The License agreement is part of the primary contract agreement made between the licensor and the licensee. The Publisher providing the e-resource is considered as Licensor and the institution subscribing the resource is known as Licensee. One should carefully go through the license agreement Before Signing:

Some definitions:

Authorized users: Current members of the staff of the authorized sites whether on a permanent, temporary, contract or visiting basis and the users who are currently studying at the authorized site institution, which are permitted to access the secure network from within the premises of the authorized sites.

Walk In Users : Ensure that the walk- in users to your library, to whom you permit to access the other resources of your library are allowed and their mention is clearly defined in the license Agreement .

Authorised Use: The subscriber and its authorised user may:

- Access, search, browse and view the subscribed products
- Print and download a reasonable portion of the subscribed products
- Serial downloading and redistributing or preserving for archival purpose is not at all allowed
- The download of article can be made for research purpose
- The downloading of the article is not permitted for commercial use.

Types of Membership: Single user, Two User, Multiple User (i.e. 5, 10, 15 users) should be clearly defined in the agreement and there should be freedom to choose the members of a consortium.

Arbitration

- Normally all publishers in case of any dispute put a clause in the license agreement that the litigation suit will be settled in the courts of their own

country. At this point of time, one has to deliberate and insist on settling the issues in the courts of our own country.

- The body in our country for settling the dispute to arbitration is International Center for Alternative Dispute Resolution (ICADR), New Delhi.

11.5 Archival Access: Archival access issue should be very well defined in the licensing agreement:

- Whether CD will be provided on the termination of the product or;
- Access to the subscribed product for the period of subscription will be provided from their server site;
- Some mention about token amount to be charged for archival access at the mutually agreed price.

Conclusion

The INDEST-AICTE Consortium is the most ambitious initiative taken so far in the country. It is the biggest Consortium in terms of number of member institutions in Asia. The Consortium attracts the best possible price and terms of agreement from the publishers on the basis of strength of its present and prospective member institutions. Due to increase in number of new centrally funded institutions like IITs, IIMs, IISERs, NITs, NITTTRs, etc., budget constraints, increase in the prices of the eResources and currency fluctuation, the consortium is facing an uphill task to run the show in the best possible way. Despite above factors, over all, the year gone by has witnessed an all round improvement in our performance. Not even a single eResource was dropped from the list of its existing resources. I hope that the INDEST-AICTE Consortium will flourish more and achieve many more milestones with the inclusion of the new centrally funded institutions and with support from all quarters especially the MHRD, Government of India.

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Library Resource Sharing Academic Library in Digital Era

Deepti Sharma* and Sangeeta**

Abstract

Article deals with various aspects of library resource sharing in changing context. The resource sharing has advocated as the third dimension of a modern library, which gives the final touch to the modern automated and networked library system. It discusses problems, Prospects and prerequisites to establish a library resource sharing network and essential characteristics of the resource sharing system from user's point of view. Libraries must adopt IT just to survive and they should actively participate in the resource sharing movements, because the concept of libraries in physical boundaries is going to be part of history.

1. Introduction:

At present time when the Computer and Communication Technology has gained the central role in all occupations and drastically changed the way people think, communicate and do business, it became indispensable to computerize and network the libraries just to survive. The entrance of these new technologies in library premises rescheduled the functioning of libraries and provided a new dynamic shape to the age-old concept of resource sharing. Lack of effective and efficient technology has been a major hurdle for resource sharing in India, besides the lack of co-operation among the participating libraries. Now by the use of Information Technology, it became possible to create co-operative functional resource sharing library-network, which is the--most important requirement now where the economic consideration, information explosion and specialized users needs are forcing the libraries to co-operate.

2. Characteristics of a Networked Library Resource Sharing System

Speed: The resource sharing system should be speedy. It should be based on the latest means of data communication systems and programs. It should be able to judge the timeliness and urgency of user's information need, because the use of information depends on whether it is provided at right time or not.

Accuracy: The resource sharing system should be able to locate and provide the accurate information. It should be reliable and error free.

Cost / fee: The information provided should be cost effective. It must be less than the original cost of document.

Staff courtesy / knowledge / assistance: The professionals engaged in the resource sharing activities should be knowledgeable and prompt to handle the queries. The speed and accuracy of manual resource sharing system depends on these professionals.

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Consistency of service and reliability: It must be consistent and reliable. The resource sharing activity should be adopted as an important component of present library system.

Communication (provision for status reports: The union catalogues should be able to provide the status report regarding availability of the document.

Delivery and request options: The resource center should be able to deliver the needed document! Information through required mode of delivery i.e. via e-mail, fax, courier or by post

Self-service options: It will be easy to use, so that user can handle it without any problem.

3. Need of Resource Sharing:

The explosive growth of all forms of literature.

Increasing demands on information.

Inflation in the cost of materials.

Increasing cost of information.

To help less equipped libraries.

To share the valuable resources

To boost the distance learning and more.

Impossible to be self sufficient to meet increasing demands of its users from own collection and it is not desirable to develop huge collections anticipating future demands.

To reduce the cataloguing cost.

4. Requirements for Resource Sharing

There is need for electronic catalogue and indexes for print resources available in the library.

The technology or equipment to link libraries and to make users aware of collection of owns library and other libraries.

Standardized software hardware and databases.

Operating policies on the type of information and archives which users can access (books, journals, reports, catalogue, indexes, publications etc.)

Training of own staff members and end users for effective use of electronic media.

5. Problems, Prospects, and Prerequisites

If we look at the usefulness and strength of resource sharing among libraries, we find a very enthusiastic picture, but on the other hand, when we analyze the ground realities of the present situation of our academic institutions and libraries, it seems worthless to talk about these services and activities. We have to accept the realities to reform them as soon as possible, because the growth of IT will not leave space to do anything after some years. The major problems to be eliminated before may be identified as:

The required technology and needed organizational structures are not presently available to provide the required level of service, comparable to that available today without the concept of resource sharing.

Resource sharing will affect the economics of publishing by increasing unit pricing as library orders decline. A substantial part of the prospective saving from resource sharing will thus evaporate.

A large library may become more and more of a lender (rather than borrower) of materials, causing resource sharing to be a drain rather than a source of additional material.

If all libraries turn to resource sharing, none will acquire sufficiently and have books to lend;

In spite of these lacunae, we have started to move in the direction. At this stage, it is essential to develop some sort arrangements to streamline the movement.

Followings might be recognized the prerequisites of a functional resource sharing system.

i. Common code of conduct

Apart from similar software and networking, protocols the participating libraries have to evolve a common code of conduct regarding the collection development (Acquisition Policy) and resource sharing. There are several basic agreements among libraries that must be developed to operate a co-operative resource- sharing network. It includes.

- a) Agreement to share currently owned materials will protocols, limitations and priorities.
- b) Financial agreement, to safeguard the individual recognition of the libraries.
- c) Agreement on acquisition policies to ensure consistent development of holdings and to avoid redundancy.
- d) Agreement of record keeping to streamline and to ensure the smooth operations from acquisition to borrowing and lending.

ii. Infrastructure

It includes the installation of required hardware and software to create bibliographical, contents pages, abstracts and full text electronic databases and their networking. It is also needed to create various union catalogues and to develop efficient software to handle on-line users query. In addition to these a sound document delivery system could also be needed to send the required information to its end user. In nut shelter library wants to be part of resource sharing network should have to have computers, printers, modem, scanners, database creation and networking software of specified standards, telephone connectivity, network access, photocopying machines, fax and a reliable postal system. The cost effectiveness of resource sharing is diminished at the present, because it has to run in parallel with other running system.

iii. Legal copyright and photo copying laws

It is noticeable that the resource sharing activities should violate the copyright and photocopying laws.

iv. Trained manpower

The establishment and organization of resource sharing activities are not possible without the competent, trained and dedicated work force. At present, it is needed to organize massive education and training programs via different modes to fulfill the required need.

v. Aware users

The user is the most important component of any system. Keeping in view this fact, participating libraries and nodal agency simultaneously have to develop and organize user education / orientation programs in changing context, to ensure the maximum utilizations of the resource sharing activities.

In addition to above said prerequisites it is essential to adopt some professional ethics to run the system smoothly. There is no procedure to impose this idea on participating libraries, but it is worth noticeable that in future only those libraries will survive whose professionals will be guided by this idea.

Conclusion:

In case of libraries, the automation and networking should be considered as the first and second dimensions and the resource sharing as third dimension, which opens the doors of services where imagination is the only limit. We have started to move in this direction due to this various library networks have emerged. Now it depends on librarians and libraries whether they want to survive or not, if yes they must adopt IT and actively participate in the resource sharing movements, because the concept of libraries in physical boundaries is going to be part of history.

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यूनिकोड और हिन्दी भाषा में सूचना संग्रहण: एक विवेचनात्मक अध्ययन

डॉ. रामगोपाल गर्ग★ एवं डी. एस. सेंगर★★

सार (Abstract)

प्रस्तुत लेख में यूनिकोड के माध्यम से डिजिटल हिन्दी सूचना संग्रहण में फॉन्ट से सम्बन्धित समस्याओं को कैसे आसानी से हल किया जा सकता है एवं अपने पर्सनल कम्प्यूटर को हिन्दी में कार्य करने हेतु कैसे सक्षम बनाया जा सकता है, आदि के समाधानों का विस्तार से वर्णन है साथ ही एनकोडिंग की आवश्यकता, रोमन लिपि की एनकोडिंग, भारतीय भाषाओं की एनकोडिंग, भारतीय भाषाओं की प्रकृति, यूनिकोड की संकल्पना, यूनिकोड हेतु कम्प्यूटर को सक्षम बनाने हेतु सुनिश्चित कमाण्डों का संक्षिप्त ब्योरा इसमें दिया गया है।

प्रमुख शब्द : यूनिकोड, एनकोडिंग आस्की (ASCII), इस्की (ISCII), ट्रू टाइप फॉन्ट, यूनिकोड आधारित फॉन्ट, ब्राम्ही लिपि, देवनागरी लिपि, इंस्क्रिप्ट (INSCRIPT), की-बोर्ड, परिवर्तन-सॉफ्टवेयर, टी.बी.आई.एल. सॉफ्टवेयर।

1. कम्प्यूटर की भाषा (Computer Language) :

कम्प्यूटर में सारी गणनाएं दो संकेतों 0 एवं 1 से होती हैं। प्रत्येक 0 या 1 एक बिट (Bit) को प्रदर्शित करते हैं। बिट शब्द Binary digit से बना है। 0 एवं 1 हों या नहीं साथ ही विद्युतीय सर्किट में ऑन/ऑफ को प्रदर्शित करते हैं इससे यह तो स्पष्ट है कि कम्प्यूटर की अपनी स्वतंत्र भाषा है। यह बात अलग है कि कम्प्यूटर का विकास ऐसे देश में हुआ जहां अंग्रेजी भाषा प्रयुक्त होती है अतः लोग यह समझ बैठते हैं कि अंग्रेजी ही कम्प्यूटर की भाषा है। कम्प्यूटर की अपनी भाषा है जो 0, 1 के रूप में होती है।

2. इनकोडिंग की आवश्यकता क्यों (Why Encoding) ?

अब प्रश्न उठता है कि यह हमारी भाषाओं में काम कैसे करता है। कम्प्यूटर एक इलेक्ट्रॉनिक तंत्र है। यह किसी भी भाषा को नहीं पहचानता, वह केवल अपने स्विचों की दो स्थितियां ऑन/ऑफ को पहचानता है। चूंकि कम्प्यूटर केवल दो स्थितियों या अंकों को ही पहचानता है इसलिए कम्प्यूटर वैज्ञानिकों को इसके लिए एक भाषा का निर्माण करना पड़ता है जो हमारी भाषा और कम्प्यूटर की भाषा के बीच पुल का कार्य करती है। इसके लिए भाषाओं के अक्षरों, अंकों, विराम चिन्हों आदि को इनकोड किया जाता है। इसे नीचे समझा जा सकता है।

➤ यदि हम 2 बिट का उपयोग करते हैं तब यह $2^2=4$ कैरेक्टर 00, 01, 10, 11 को प्रदर्शित कर सकते हैं।

➤ यदि हम 3 बिट का उपयोग करें, कैरेक्टरों के कम्प्यूटर में भंडारण के लिए इस स्थिति में $2^3=8$ अलग-अलग कैरेक्टरों को प्रदर्शित कर सकेंगे।

इसी सूत्र को आगे बढ़ाने पर n बिट के उपयोग करने पर 2^n अलग-अलग कैरेक्टरों को प्रदर्शित या कम्प्यूटर भंडारण में उपयोग किया जा सकता है।

3. रोमन लिपि की इनकोडिंग (Encoding in Roman Script) :

कम्प्यूटर को जैसे की अंग्रेजी भाषा समझने के लिए कुल मिलाकर 94 चिन्हों की जरूरत होती है।

A-Z 26 कैरेक्टर, a-z 26 कैरेक्टर, 0-9 10 कैरेक्टर, कुछ चिन्ह, जैसे कि +, -, %, ब्रैकेट आदि कुल मिलाकर 32

* विभागाध्यक्ष, ग्रंथालय एवं सूचना विज्ञान विभाग, विश्वविद्यालय ग्रन्थालयी (प्रभारी) केन्द्रीय ग्रन्थालय, जीवाजी वि.वि., ग्वालियर

** ग्रंथालयी, इंदिरा गांधी इंस्टीट्यूट ऑफ टेक्नालॉजी, गुरु गोविन्द सिंह इंद्रप्रस्थ वि.वि., दिल्ली - 6

अतः 94 चिन्हों को व्यक्त करने के लिए बाइनरी सहित ये 7 स्थानों की आवश्यकता होगी इसलिए प्रारम्भ में 7 बिट की व्यवस्था बनाई गई जिससे अधिकतम $2^7=128$ कैरेक्टरों को व्यक्त किया जा सकता है।

ऊपर बताए गए सभी कैरेक्टरों रोमन लिपि में हैं। रोमन लिपि के कोड को ASCII-7 कोड (American Standard Code for Information Interchange) कहा जाता है। जैसा कि ऊपर बताया गया है कि इस 7 अंकीय कोड में रोमन लिपि के सभी अक्षर, अंक और विराम चिन्ह समाहित हो जाते हैं। डिजिटल कम्प्यूटर 7 के बजाए 8 अंकों के समूह को स्टोर करते हैं जिसमें 7 अंकों में सूचनाएं होती हैं। 8वां बिट गलती जांचने के काम आता है। 8 बिट के समूह को बाइट कहते हैं। इस व्यवस्था के कारण इसमें 256 विभिन्न कैरेक्टरों को व्यक्त किया जा सकता है। इस 8 बिट के कोड को ASCII कहा गया है।

प्रारंभ में इसी कोड का इस्तेमाल किया गया साथ ही यह एक मानक बन गया क्योंकि यदि लोग एक ही कोड का इस्तेमाल नहीं करेंगे तो ऐसी स्थिति में मान लीजिए एक साफ्टवेयर में 35वां स्थान B है किसी दूसरे साफ्टवेयर में यही 35वां स्थान पर K दिया है। ऐसी स्थिति में दूसरे साफ्टवेयर निर्माता के साफ्टवेयर में फाइल लिखने पर B के स्थान पर K दिखाई देगा। इस प्रकार की स्थितियों से बचने के लिए इस मानक का सभी ने सख्ती से पालन किया। इस कोड व्यवस्था में 128 स्थान अंग्रेजी के लिए नियत है और शेष 128 स्थानों पर अन्य भाषाओं के कैरेक्टर निर्धारित किये गये। इन स्थानों पर कहीं, अरबी, कोरियाई या हिन्दी आदि के अक्षर तय किये गए हैं।

4. भारतीय भाषाओं की इनकोडिंग (Encoding in Indian Languages):

जब कम्प्यूटर को हिन्दी में प्रयुक्त करने की बात शुरू हुई तब इसके लिए इसी प्रकार की कोड व्यवस्था बनाने की कोशिशें शुरू की गईं। इन कोशिशों को कालक्रम (chronological) में विभाजित करके नीचे दिखाया गया है—

- 1983 में इलेक्ट्रॉनिक विभाग ने एक रिपोर्ट प्रकाशित की। इसके बाद (ISCII-83 Indian Script Code for Information Interchange) की घोषणा की गई।
- 1988 में इसे compact बनाने के लिए इसका संशोधन किया गया और इलेक्ट्रॉनिक विभाग ने इसे प्रकाशित कराया।
- बाद में 1991 में इसे संशोधित करके इसमें कई वैदिक अक्षर जोड़े गए और इस संशोधित संस्करण को अंगीकृत एवं मानकीकृत कर ISI-3194 दस्तावेज में ISCII-91 शीर्षक के अंतर्गत कराया गया इसीके बाद से यह भारतीय भाषाओं का राष्ट्रीय मानक है।
- वर्तमान में भारतीय भाषाओं के लिए ISCII-91 प्रयुक्त किया जाता है। भारतीय भाषाओं के लिए मानक तैयार करते समय वैज्ञानिकों की पूरी कोशिश रही कि अंग्रेजी भाषा साथ सहअस्तित्व रहे एवं इसमें उन्होंने सफलता भी पाई।

भारतीय भाषाओं की प्रकृति (Nature of Indian Languages):

ISCII कोड ब्राह्मी लिपि पर आधारित है। यहां ब्राह्मी लिपि के बारे में जानना उचित होगा। भारतवर्ष में बोली जाने वाली सभी भाषाओं का विकास ब्राह्मी लिपि में हुआ है जैसा कि हम जानते हैं कि एक लिपि का प्रयोग करके विभिन्न भाषाओं का लिखा जा सकता है। उदाहरण के लिए देवनागरी लिपि का उपयोग करके मराठी, नेपाली, हिन्दी को लिखा जा सकता है।

भारत में प्रचलित अनेक भाषाओं की लिपियां अलग-अलग दिखती हैं लेकिन इनकी वर्णमाला और लिपि समान उच्चारण पद्धति पर आधारित है। सिर्फ उर्दू को छोड़कर अन्य सभी भारतीय भाषाओं का उद्गम ब्राह्मी लिपि से हुआ है। ऐतिहासिक दृष्टि से देखने पर ज्ञात होता है कि अशोक काल से उत्तर और दक्षिण भारत में ब्राह्मी लिपि का व्यापक उपयोग देखने को मिलता है। चौथी शताब्दी के उत्तरार्ध में ब्राह्मी शैली दो भागों में विभक्त हो गई—उत्तरी शैली एवं दक्षिणी शैली, समय के साथ इन लिपियों में बहुत अन्तर आ गया एवं बिना सीखे उत्तर भारतीयों को उत्तर की लिपियों को पढ़ना असंभव हो गया। इस अंतर का मुख्य कारण लिखने की सामग्री की भिन्नता मुख्य रूप से रहा है। दक्षिण भारत में तामपत्रों की बहुलता के कारण उसी का प्रयोग लिखने में किया जाता था। इन पत्रों में नोकदार कलम से लिखने पर तामपत्रों के फटने का डर रहता था जबकि उत्तर भारत के वृत्तों के बजाये ऊपर-नीचे की मात्राओं के साथ लिखने की परम्परा विकसित हुई।¹

चौथी शताब्दी में ब्राह्मी उत्तरी शैली से गुप्त लिपि का जन्म हुआ छठी शताब्दी आते-आते यह लिपि कुटिल लिपि में परिवर्तित हो गई। इसी कुटिल लिपि से देवनागरी लिपि का विकास हुआ।

यह सब बताने का उद्देश्य एक मात्र यही था कि भले ही भारतवर्ष में विभिन्न भाषायें, लिपियां प्रचलित हों लेकिन सभी की उत्पत्ति ब्राह्मी लिपि से हुई है। इस बात का ध्यान वैज्ञानिकों के द्वारा मानक बनाने में प्रयुक्त किया गया। ISCII-91 Code ब्राह्मी लिपि पर आधारित होने से इस लिपि से उत्पन्न सभी लिपियों के लिए समान हैं न केवल भारतीय लिपियों बल्कि तिब्बती, थाई और सिंहली आदि भाषाओं के लिए भी यह कोड समान है। लेकिन यह दुखद सच है कि ISCII कोड को सॉफ्टवेयर निर्माताओं के द्वारा प्रयुक्त नहीं किया गया। इसको ऐसे समझ सकते हैं—मान लीजिए 165 के स्थान पर ISCII कोड में 'क' के लिए नियत किया हुआ है। यदि एक सॉफ्टवेयर निर्माता 'ग' रख दे दूसरा 'च' रख दे ऐसी स्थिति में पहले निर्माता के सॉफ्टवेयर में तैयार दस्तावेज में जहां-जहां 'ग' टाइप किया हुआ है दूसरे सॉफ्टवेयर में खोलने पर वहीं-वहीं 'च' दिखाई पड़ेगा। ISCII कोड को विंडोज जैसे ऑपरेटिंग सिस्टम में सीधे इस्तेमाल नहीं किया जा सकता इसके लिए फॉन्ट कोड की आवश्यकता होती है। इसके लिए C-DAC ने ISFOC फॉन्ट कोड विकसित किया है और इसे मानक बनाने की कोशिश की गई लेकिन ऐसा नहीं हो पाया।

UNICODE की संकल्पना

ASCII की सबसे बड़ी समस्या दो अक्षर A & S से है जो कि American Standard प्रदर्शित करते हैं अतः यह सही मायनों में अमेरिका के लिए मानक हो सकता है। यह एक सार्वभौमिक मानक है जो कि एक दूसरे से जुड़े विश्व-ग्राम के लिए नहीं हो सकता। सूचना के संचार के जहा अलग-अलग देश अलग-अलग लिपियों साथ ही अलग-अलग देशों के बनाये अपने मानक का इस्तेमाल होता था। ऐसी स्थिति में विश्व में व्यवसायिक गतिविधियों में जब कम्प्यूटर का इस्तेमाल बहुतायत में होने लगा तब एक समान सार्वभौमिक इनकोडिंग मानक की आवश्यकता महसूस की गई। विविध प्रकार के प्लेटफार्म फॉन्ट सिस्टम के बावजूद आवश्यकता ऐसी मानक कोडिंग की थी जिसके फलस्वरूप विश्व की सभी भाषाओं के सहअस्तित्व की भावना रह सके। इन सभी समस्याओं का एकमात्र समाधान है यूनिकोड—इसकी संकल्पना की गई।

यूनिकोड ASCII की तुलना में 16 बिट कोड है और 65,000 से भी अधिक कैरेक्टरों को इनकोड कर सकता है जो कि विश्व की प्रचलित सभी महत्वपूर्ण भाषाओं के कैरेक्टरों को इनकोड करने में पर्याप्त है। बाद में समय के साथ इसे विस्तारित किया गया। यूनिकोड मानक और ISO-1046 UTF-16 आदि ऐसा विस्तार तंत्र प्रदान करते हैं जिससे 1 करोड़ से अधिक कैरेक्टरों को इनकोड किया जा सकता है जो कि विश्व में प्रचलित समस्त भाषाओं, ऐतिहासिक लिपियों के वर्णों को इनकोड करने में पर्याप्त है।³

यूनिकोड ASCII की सरलता और एकरूपता पर आधारित है जैसा कि हमें ज्ञात है कि ASCII लेटिन वर्णमाला को इनकोड करने की सीमित रखता है। चूंकि प्रारंभ में कम्प्यूटर में ASCII कोड का प्रयोग किया गया अतः डाटा के गमन में मुश्किल खड़ी न हो इसके लिए यूनिकोड के पहले 128 स्थान होने के लिए प्रयुक्त किये गए। यूनिकोड में हिन्दी और दूसरी भाषाओं को भी स्थान मिला है। इसके लिए ISCII-89 को आधार बनाया गया है जिससे UNICODE में थोड़ी समस्या है। अगर ISCII-91 को आधार बनाया गया होता तो कुछेक मामूली दिक्कतें भी नहीं होती चूंकि यूनिकोड में देवनागरी लिपि भी शामिल है इसलिए सारे यूनिकोड समर्थित सॉफ्टवेयर खुद-ब-खुद हिन्दी समर्थक हो गये।

यदि हम UNICODE पर आधारित हिन्दी को सक्रिय करके फॉन्ट सम्बन्धित समस्याओं से बचना चाहते हैं तो निम्न प्रक्रिया अपनाकर अपने कम्प्यूटर पर आधारित हिन्दी पर काम करने में सक्षम बना सकते हैं ^{5,6}

Unicode enabling on Computer to avoid font related problems to display documents/ web-pages, send & receive e-mails, etc. in Hindi

Procedure to enable use of Unicode to work in Hindi on computers having Windows 2000 or later version Operating Systems :

For Windows XP

1. Step - 1 : Go to **Start-> Control Panel > Regional & Language Options** >Click on **Languages Tab** (the following screen will appear)
Tick the Check box to **Install files for complex scripts...**, and click **OK**.



2. (Following message would appear) Click **OK**

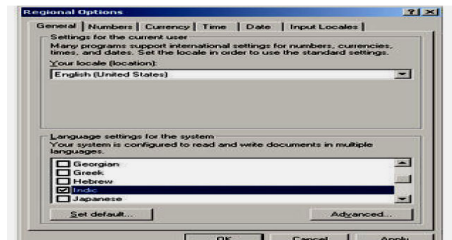


3. You will be required to place the Windows XP CD in the CD drive to enable Indic languages including Hindi
Step - 2 : Again Go to **Start-> Control Panel > Regional & Language Options** >Click on **Languages Tab**
Click on **Details** and Click on **Keyboard** and Press **Add**
Select – **Hindi** and for **Keyboard layout** – Select **Devnagari – INSCRIPT** and Press **OK**
Reboot the System
In the bottom System tray, **EN** icon will appear
From the System tray Click on **EN** or Press Keyboard's left side **ALT+Shift** to toggle between **EN (English)** and **HI (Hindi)**.

For Windows 2000

1. Go to **Start->Settings->Control Panel->Regional Options**
The following screen would display
From the **Languages setting for the system** tick the Check box of **Indic** and click **OK**.

Figure - 1



You will be required to place the Windows 2000 CD in the CD drive to enable Indic languages including Hindi

2. **Go to Start->Settings->Control Panel->Regional Options**
The above screen (Figure - 1) would display

Click on **Input Locales Tab**

For Input Language Click on **Add**

Select – **Hindi** and for **Keyboard layout** – Select **Devnagari – INSCRIPT**

Reboot the System

From the System tray Click on **EN** or Press Keyboard's left side ALT+Shift to toggle between **EN (English)** and **HI (Hindi)**

For Windows VISTA

- Go to the Control Panel and then click to the Regional and Language Option. Choose the Country – India.
- Click on the Key-board and Languages Tab and choose the Hindi and for Keyboard layout – Select Devnagari – INSCRIPT

From the System tray Click on **EN** or Press Keyboard's left side ALT+Shift to toggle between **EN (English)** and **HI (Hindi)**.

With the enabling of Unicode in your system, the INSCRIPT key-board driver and Unicode supported Mangal and Arial Unicode MS fonts will be installed in your system.

For typing using Typewriter/Remington, Phonetic/ Roman Keyboard layouts

Solution No. 1 : <http://www.ildc.in>.

- Choose the language. (Hindi)
- Click on the 'Download'
- Click Option No. 4 (यूनीकोड समर्थित की-बोर्ड ड्राइवर्स)
- A zip file will be downloaded.

Unzip the folder and run setup.exe file. Gist-OT-Typing Tool will be installed in your system. With the help of Gist-OT-typing tool, you can type in Remington and Phonetic keyboard layout.

Solution No. 2 : <http://www.bhashaindia.com>.

- Click on Downloads >> INDIC IME >> Indic IME 1 (Hindi)
- A zip file will be downloaded.
- Unzip the folder and run setup.exe file.

How to Use

Go to Control Panel >> Regional and Language Option >> Click on Language Tab

Click on Details and Click on Keyboard and Press Add

Select – Hindi and for Keyboard layout – Select Hindi Indic IME 1 (V 5.1)

For Fonts Converter (Non Unicode fonts like Akshar, ISM, APS, Akruti, KrutiDev etc. to Unicode)

<http://www.ildc.in>.

- Choose the language. (Hindi)
- Click on the 'Download'
- Click Option No. 5 (सार्वत्रिक हिन्दी फॉन्ट कोड एवं भण्डारण कोड परिवर्तक)
- A zip file will be downloaded.

Unzip the folder and run setup.exe file. Parivartan software will be installed in your system. With the help of Parivartan, you can convert non Unicode fonts Hindi files to Unicode's Mangal font.

वर्तमान स्थिति एवं निदान (Present condition) :

सभी बड़ी साफ्टवेयर कम्पनियां वर्तमान में यूनीकोड के मानकों को साफ्टवेयर निर्माण में प्रयुक्त कर रही हैं। अतः डाटा के विनिमय आदि में दिक्कतें कुछ समाप्त हो रही हैं। लेकिन यहां यह जानना आवश्यक होगा। अभी भी हिन्दी में विभिन्न प्रकार के टू टाइप फोंट का बोलबाला है। टू टाइप फोंट 8 बिट फोंट है। अतः यदि कोई फाइल इन फोंट्स को प्रयुक्त करके बनाई गई है दूसरे कम्प्यूटर पर खोलने पर वह फॉन्ट कम्प्यूटर में होना चाहिए नहीं तो फाइल खुलने पर अपरिचित चिन्हों को आप स्क्रीन पर पायेंगे। ऐसी स्थिति से निपटने के लिए आवश्यक है कि हम यूनीकोड समर्थित फॉन्ट का इस्तेमाल करें। ओपन टाइप फॉन्ट जो कि 16 बिट फॉन्ट है, यूनीकोड सुसंगत फॉन्ट है।

प्रारंभिक दौर में जब टू टाइप फोंट का बोलबाला था, फाइल के साथ फॉन्ट को भी भेजा जाता था जिससे कि इन फॉन्ट को प्राप्तकर्ता अपने कम्प्यूटर में इंस्टॉल कर ले जिससे कि फाइल में क्या है देखा जा सके। इसी

प्रकार इन्टरनेट के विभिन्न वेबसाइट की अंग्रेजी में अलग भाषा में होने पर देखने के लिए डायनेमिक फॉन्ट विकसित किये गये डायनेमिक फॉन्ट वे फॉन्ट थे जो आपने कम्प्यूटर के वेबसाइट से कनेक्ट होते ही तेजी से आपके कम्प्यूटर की कैश मेमोरी में लोड हो जाते थे। जिससे जितनी देर में वेबसाइट लोड होनी थी उतनी ही देर में फॉन्ट लोड हो जाते थे और आपको सामग्री अपनी भाषा में दिखाई देती थी। कहने का तात्पर्य यह है कि यह समस्या का समाधान नहीं है। यूनिकोड और ओपन टाइप फॉन्ट का इस्तेमाल करने से हिन्दी के रास्ते की सारी समस्याएं दूर हो जाती हैं। वर्तमान में यूनिकोड का प्रयोग होने से बहुत सारी समस्याओं से निजात मिल चुकी है। लेकिन इसके लिए कुछ ज्यादा कसरत करना पड़ता है जैसे कि कम्प्यूटर में प्रयुक्त विभिन्न ऑपरेटिंग सिस्टम में हमें अपने भाषा को सक्रिय करना होता है।

जैसा कि हम सभी जानते हैं कि कम्प्यूटर डाटा संग्रहण एवं प्रोसेसिंग के लिए प्रयुक्त किया जाता है। डाटा का संग्रहण मुख्यतः की-बोर्ड के द्वारा ही किया जाता है। इस ओर देखने पर ज्ञात होता है कि हिन्दी में कई प्रकारके की-बोर्ड को प्रयुक्त किया जाता है इसके विपरीत अंग्रेजी भाषा में एक ही की-बोर्ड जिसे यूनिकोड की-बोर्ड कहते हैं प्रयुक्त होता है। कितने भी कम्प्यूटर में जानकार होने पर वर्तमान में हिन्दी भाषा को टाइप करना अभी भी मुश्किल प्रतीत होता है। कम्प्यूटर सॉफ्टवेयर के विकास के साथ-साथ की बोर्ड भी सॉफ्ट फार्म में उपयोग किया जाता है। चूंकि भारतीय भाषाओं का विकास का स्रोत बाही लिपि है अतः इसी को दृष्टिगत रखते हुए 1991 में भारतीय मानक ब्यूरो ने 1513194-1991 दस्तावेज में भारतीय मानक सूचना अंतर विनिमय के लिए भारतीय लिपि संहिता यूडी सी 681-3 में इसे प्रकाशित किया तभी से INSCRIPT की-बोर्ड सभी इलेक्ट्रॉनिकी उपकरणों के लिए भारतीय भाषाओं का राष्ट्रीय मानक है।

यूनिकोड आधारित कोडिंग प्रणाली से अब हिन्दी या विश्व की किसी भी भाषा में निर्मित वेबसाइट की सामग्री को बिना फॉन्ट डाउनलोड किये आसानी से पढ़ा जा सकता है। ऐसी कई वेबसाइट उपलब्ध हैं जहां से हम यूनिकोड सुसंगत फॉन्ट डाउनलोड कर सकते हैं। अब यदि आपने कोई सामग्री टू टाइप फॉन्ट में बना ली है तो उसे 'परिवर्तन' सॉफ्टवेयर या माइक्रोसाफ्ट के टी.बी.आई.एल. नामक सॉफ्टवेयर से परिवर्तित भी कर सकते हैं।

इस पूरे विवरण से यह तो स्पष्ट हो जाता है कि हिन्दी में कम्प्यूटर पर कार्य करना अब आसान हो गया है। यूनिकोड जो कि टेक्सचुअल जानकारी (Textual information) जानकारी को प्रसारित करने के लिए एक प्रमुख बिल्डिंग ब्लॉक है, इसके अनुप्रयोग करके हम संचार क्रांति में अपना योगदान कर सकते हैं। जरूरत इस बात की है हम विभिन्न मानकों को मानें साथ में जाने एवं बहुतायत प्रयोग करें भी और प्रयोग हेतु अन्य लोगों को प्रोत्साहित करें क्योंकि मातृभाषा के प्रति हमारा यह दायित्व भी है।

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Virtual Resource Available in Indian Institute of Management, Indore Library: A Case Study

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Abstract

An attempt has been made to determine the present status of digital resources. This paper presents the findings of a survey to about the virtual resources through online databases, online journals etc available in the IIM, Indore library. Web survey and interview method used for data collection. The result of this survey are presented and discussed in this paper.

Key words: Virtual resources, Electronic resources, Online Databases, Collection Development.

Introduction

In the world of the Internet, the rapid growth and exponential use of digital medias leads to the emergence of virtual environments namely digitization composed of multiple and independent entities such as individuals, organizations, services, software and applications sharing one or several missions and focusing on the interactions and inter-relationships among them. The underlying resources mainly comprehend data management, innovative services, computational intelligence and self-organizing platforms. Due to the multi-disciplinary nature of digitization and their characteristics, they are highly complex to study and design. This also leads to a poor understanding as to how managing resources will empower digitization are innovative and value creating. The application of Information Technologies has the potential to enable the understanding of how entities request resources and ultimately interact to create benefits and added values, impacting business practices and knowledge. These technologies can be improved through novel techniques, models and methodologies for fields such as data management, library management, document management, web technologies, networking, security, human-computer interactions, artificial intelligence, e-services and self-organizing systems to support the establishment of digital library and manage their resources.

Recent developments in ICT, especially the web, have led to the creation of a growing number of virtual libraries in the India, UK, USA and elsewhere. This new phenomenon is designed to bring a paradigm shift in the ways we create access and use information. The design and development of virtual libraries depend on computer, communication and other technical skills, and the dream of successful virtual libraries leading to a global virtual environment can only be fulfilled when sufficient practitioners have the skills to design, build and manage them.

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Indian Institute of Management Library, Indore

The Indian Institute of Management Indore Library with its modern collection of knowledge resources and innovative information services fills an essential role for students, faculty, and the surrounding community in their intellectual pursuits.

It is a hybrid library with the state-of-the-art technological applications. The Library holds knowledge resources predominantly related to management and allied subjects. The entire Library collection including the CD-ROM databases and the online databases are made available through Institute's network. Users can access the online databases and also find out the real-time availability of library materials from their own computer terminals. The Library offers a range of information services set to the highest professional standards.

Library Services

It is providing following services:

Web OPAC:

Inter-Library Loan/Resource Sharing

Proactive Information Services

Reference and Research Services

Ask the Librarian

CAS

SDI

Electronic notification of new arrivals

Infrastructure facilities

Library has a Tulsient CD-MIRROR server, which can host more than 1500CDs and another Pentium server to host the IIMI Digital Library. All the databases have been web-enabled and made available on the Institute's LAN through the Virtual Library. Every functional unit in the library has been equipped with a network computer to enable smooth information flow. Also there are six computers kept inside the library to facilitate information accessing by users. Library also has DVD, VCR, Scanner, Video Camera and HP LaserJet Printer.

Library is using Virtua-an integrated library management system for automating various functions in the Library like book procurement, circulation. Virtua provides web enabled online public access catalogue (OPAC) and is available through institute's LAN. Library is using RFID technology for book security purpose.

Library Collection

The fast growing collection includes over 21000 books on management and allied subjects. Reference resources include encyclopedias, directories, yearbooks, handbooks and manuals. The current subscription to periodicals includes 318 foreign journals and 134 Indian journals. Other collection includes 146 videocassettes and 290 CD-ROMs/DVDs. The entire electronic collection including the CD-ROM databases and online databases are made available to the users through the Institute intranet.

Users can access the electronic databases and find out the real-time availability of various library materials from their own computer terminals.

Databases

IIMI, library provides the following services and subscribes to the below mentioned databases:

1. ABI / Inform: ABI/INFORM Global is a database covering business, management, economics and a wide range of related fields. It provides fast and easy access to information on 60,000 companies. It covers over 1,000 titles and provides abstracts of material from 1971 onwards and full text from 1987 to present.

Resource 2004 full-text journals + 2000 journals indexed

Print-base No

Media Web with CD ROM backup

Back-files 1985-Present; 1971-1984 Back file

Archival Access On CD ROM

Simultaneous Access Un-limited

2. ACM Digital Library: The ACM Digital Library hosts over 103,000 full-text articles from ACM journals, magazines, and conference proceedings and half million bibliographic Records with about 2,50,000 links to full bibliographic information and 70,000 further links to full text resources.

Resource 32 full-text journals + conference proceedings + others

Print-base No

Media Web with CD ROM backup

Back-files Since inception

Archival Access On CD ROM

Simultaneous Access Un-limited

3. Capitaline: Capitalize 2000 is a corporate database covering more than 10,000 listed and unlisted Indian companies. Capitalize is the foremost Indian corporate database, being used all leading financial institutions, security firms, commercial banks and educational institutions. Being marketed for the last 18 years, Capitalize has the USP of covering the largest number of data points for every company? As many as 1400. The major features are as follows:

1. More than 10,000 listed and unlisted companies
2. Industry-specific formats for presentation of Balance Sheet & P & L data. We have seven formats: General, Banks, Finance, Shipping, Hotels, Power and Software
3. More than 1400 data fields per company in the financial section. This encompasses 10+ years? Balance sheet, P & L, schedules and notes to accounts. Also funds flow, reported cash flow, fore data, power & fuel consumption, research & development
4. Non-financial information cover: List of directors, bankers, collaborators, plant and marketing office locations, company bio-data, expansion plans and credit rating information.
5. Quarterly results, segment wise results, trailing 12 months results, comparison between financial of company, sector, business house etc.

6. Director's report, Auditors' Report, Chairman Speech, Corporate Governance report, Management Discussion etc.
7. Common size ratios for b/s, P&L, funds flow. Twenty key financial ratios like debt - equity ratio, quick ratio, interest coverage ratio etc. Simple and compound growth.
8. Value added reports like analysts meet coverage, AGM coverage, research reports, quarterly result analysis, interviews with CEOs, chairman etc.
9. Sector reports and sector trends of more than 50 industries like cement, steel, automobiles, banking etc

4. CRISIL Business : CRISIL Business Information products and services comprise of accurate and reliable news, information, analysis and forecasts on the Indian economy, industries, companies and financial markets. CRIS INFAC Industry Information Service presents a detailed and comprehensive analysis of the current trends and the long-term performance outlook on 41 industries in India. It includes the evolution of an industry, the regulatory environment, cost structures, nature and extent of competition, global trends along with statistical information on capacities, production, imports-exports, domestic and international prices, and consumption patterns. This information is updated a regular basis and the 3-5 years long term outlook is updated on an annual basis.

5. Business Sources Primer (EBSCO): Business Source Premier, designed specifically for business schools and libraries, is the world's most comprehensive index of business journals, magazines and other sources. This file contains indexing and abstracts for more than 3,800 business-related periodicals with coverage back as far as the first half of the 20th century for many leading scholarly journals. It also includes the research community's foremost business thesaurus as well as searchable citations (a.k.a. linked, cited references) for more than 1,100 academic journals. In addition, this database provides full text for more than 3,000 periodicals, including nearly 1,000 full text peer-reviewed journals, the most found in any business database.

Academic Search Elite

Academic institutions worldwide depend on this database for their core resource of scholarly information. Academic Search? Elite contains full text for 1,833 journals. The database includes PDF images for the great majority of journals; many of these PDF's are native (searchable) or scanned-in-color. This scholarly collection provides full text journal coverage for nearly all academic areas of study - including social sciences, humanities, education, computer sciences, engineering, physics, chemistry, language and linguistics, arts & literature, medical sciences, ethnic studies, etc.

3,232 Abstracted and Indexed Journals 1,833 Full Text Journals 2,351 Peer-Reviewed, Abstracted and Indexed Journals 1,298 Peer-Reviewed, Full Text Journals.

TOC Premier

TOC Premier - Provides access to the most up-to-date table-of-contents information for over 22,000 journals. This collection was created to provide users with a

comprehensive, unduplicated list of titles which account for the more than 22 million records in this citation-only database. Records in TOC Premier are culled from three vast resources: EBSCO Publishing's entire collection of existing proprietary databases, EBSCO host Electronic Journal Service (EJS), and the British Library Document Supply Centre, the leading document provider in the world. Citations in TOC Premier Date back to the 1960's, and the database is continuously updated.

6. Emerald Full Text : Emerald was established in 1967 by a group of senior academics formed MCB University Press, an publishing house that focused on niche management disciplines including strategy, change management, and international marketing.

In 2001 MCB University Press adopted the name Emerald as its new organizational identity, reflecting a renewed, high-level commitment to its guiding principles:

- Provision of high quality, value for money management content,
- Provision of effortless access to that content, continuously improving our service levels to our customers, and
- Enabling world-wide distribution for our contributors

7. Euromonitor GMID Service: The Global Market Information Database (GMID) provides key business intelligence on countries, companies, markets and consumers. It is an integrated on-line information system covering over 350 markets and 207 countries. GMID integrates research across the following categories of information:

Statistics: Consolidates information on consumer lifestyles, retailing, countries, consumer market sizes and forecasts.

Analysis: Euromonitor's in-depth market analysis reports, Major Market Profiles and journal articles covering consumer, industrial and service sectors. Also accessible are reports focusing on consumer lifestyles and the retailing industry.

Companies: Profiles for leading FMCG companies along with financial, market share and brand information.

Sources: All information sources stored on Euromonitor's internal databases.

8. IEEE Xplore: It provides access to more than 450,000 full text articles from more than 120 journals and 600 conference proceedings of the IEEE and IEE, as well as nearly 900 IEEE standards, all published since 1988.

The resource covers more than 950,000 documents from over 12,000 publications, including 219 journals, transactions, magazines, conference proceedings, IEEE Standards. More than 25,000 new pages are added per month. It provides access to more than two million full-page PDF images, including all original charts, graphs, diagrams, photographs, and illustrative material.

9. INSIGHT : Insight offers instant and accurate information on corporate fundamentals of 8000+ listed and unlisted companies and PSUs over the past 14 years, financial information on corporate, which is classified into more than 260 industrial sectors with complete break-up. It also provide single window access to

35,000 annual reports and prospectus of companies dating back to 1995. Resources Information on 8000+ Companies and PSUs, 260+ Industrial Sector's Financial Information, 35,000 annual reports

10. Elsevier's Science Direct and Academic Press's Ideal: ScienceDirect is the web-based interface to the full-text database of Elsevier Science journals and Academic Press (Ideal), one of the world's largest providers of scientific, technical and medical (STM) literature. The ScienceDirect offers a rich electronic environment for research journals, bibliographic databases and reference works. The database offers more than 1500 scientific, technical and medical peer-reviewed journals, over 59 million abstracts, over two million full-text scientific journal articles, an expanding suite of bibliographic databases and linking to another one million full-text articles via Cross Ref to other publishers' platforms.

IIM Indore would get unlimited and complete online access to electronic journals published by the Elsevier Science and Academic Press. Moreover, Elsevier Science also guarantees a fixed maximum price increase of 5.0 % on print journals as against average increase of 10%.

Resource 2137 journals published by Elsevier Science and Academic Press

Print-base Yes, Participants are required to maintain their print subscription

Media Web, Back-files 1995 onwards

Archival Access Offered on the cost of preparing data set

Simultaneous Access Unlimited, **Price-cap on Print** 5%

11. J-Gate Custom Content for Consortium (JCCC): The J-Gate Custom Content for Consortium (JCCC) is a virtual library of journal literature created as customized e-journals access gateway and database solution for the INDEST consortium. The service offers the following facilities and benefits to users.

Table of Contents Browsing

Database Searching

MyTOC

Full-text Online

Resource Sharing

12. EBSCO A-to-Z: EBSCO A-to-Z® is a Web-based locator tool for all of the subscriptions to which your organization has access. This easy-to-navigate, searchable list of journals not only allows employees to easily locate all subscribed resources, but also enables your staff to consult the list before they buy, yielding cost savings for you. This business research database provides full text for more than 8,800 serials. It provides full text back to 1965 and searchable cited references back as far as 1998. Coverage includes virtually all subject areas related to business. This database is updated daily.

13. Centre for Monitoring Indian Economy Pvt. Ltd. (CMIE) : CMIE's think tank comprises of professionals with longstanding experience in economics, corporate analysis and computing technology. Increasing specialization and interdependence of economic activities have entwined business fortunes closely with

changes in external environment. CMIE provides the most reliable information on the external economic environment Information on the contingencies, the opportunities and direction of the future. CMIE is headquartered in Bombay and has offices in Bangalore, Calcutta and Delhi.

14. Alpha: Alpha is a database of mutual funds in operation in India. There are nearly a thousand mutual funds, which have on offer nearly twice as many schemes. Alpha provides you detailed information regarding these and the Asset Management Companies that run these funds. Alpha provides detailed data on each of these. This includes the daily net asset value since inception, dividend history and financial details, etc. New schemes keep getting added to Alpha as new offerings are launched by the funds. Alpha keeps you always updated with the latest data on this industry.

15. Business Beacon: The Business Beacon is a comprehensive time-series database on the Indian economy. It brings to you 9,808 economic indicators in up to six frequencies. The six frequencies are: daily, weekly, monthly, and quarterly, cumulative & annual. These totals up to 25,522 series of economic data. The database is updated daily with the latest information.

Business Beacon contains time-series data on the following broad sectors:

- Population and Demography
- National Income Statistics
- Public Finance
- Money & Banking
- Agriculture
- Industry
- Prices
- Energy
- Transport
- Capital Markets
- Investment Trends
- Foreign Trade & the External Sector
- Tourism
- Health
- Education and Employment

The database is accessible through user-friendly software. With this you may select indicators into a spreadsheet, plot charts, do a text search, calculate growth rates, etc., with ease. Business Beacon provides only all-India data. State-level and international data are available elsewhere.

16. CapEx: The CapEx database covers investment projects in Mining, Manufacturing, Electricity, Infrastructure, Services Sectors. Generally, CapEx covers over 14,500 projects at any point in time. And, the order of magnitude of the investments envisaged in these projects add up to about Rs.66,77,200 crore. The precise numbers keep changing as new projects get added and the ones that got commissioned get excluded.

17. India Trades: India Trades presents India's official foreign trade statistics and related data in a user-friendly and software-enabled database. The database is detailed up to the 8-digit level of classification. India Trades follows the Indian Trade Classification (based on the Harmonized System of Classification). India exports and imports about 10,000 commodities to and from nearly 200 countries/regions. India Trades provides you with monthly statistics on this trade. The database provides quantity, value and unit value in respect of each of products exported or imported. CMIE has processed the original data to facilitate easy analysis of the trends in India's foreign trade. The monthly time-series is available for up to ten years. Annual series is available for about 15 years. The software enables searches over this vast database. It also enables a comparative analysis of India's export performance in specific markets vis-à-vis competitors.

18. Industry Analysis Service: The IAS also provides its own analysis of the individual industries. This includes forecasts and descriptive analysis of the current trends. These analytical reports are available in the form of PDF files. Such reports are prepared by CMIE every month. The forecasts are updated every month to reflect changes, if any are required in the light of the new data. Thus, the IAS blends the art of professional monitoring and scientific analysis. The IAS is most optimally used when it is combined with Prowess.

19. Prowess : Prowess is a database of large and medium Indian firms. It contains detailed information on over 20,000 firms. These comprise, All companies traded on India's major stock exchanges, Several others including the central public sector enterprises. The database covers most of the Organized industrial activities, Banking, Organized financial and other services sectors in India. The companies covered in Prowess account for 75 per cent of all corporate taxes, Over 95 per cent of excise duty collected by the Government of India. Prowess provides detailed information on each company. This includes a normalized database of the financials covering 1,500 data items and ratios per company. Besides, it provides quantitative information on Production, Sales, Consumption of raw material, Energy. Prowess also provides daily time series of share prices, computed returns that include Dividends and other gains, P/E based on the profits of the last four quarters, a host of other useful ratios and values.

20. State Analysis Service : The State Analysis Service is designed to present an up-to-date and analytical view of the progress and prospects of the economics of the major states of India. The service is a compilation of Monthly Review of States of India. Each Monthly Review contains analysis of the recent trends in the economy of the individual State. The analysis covers

Andhra Pradesh

Gujarat

Karnataka

Madhya Pradesh

Maharashtra

Punjab

Rajasthan

Tamil Nadu

Uttaranchal

Uttar Pradesh

West Bengal

Pondicherry

The Review contains detailed statistics and a descriptive analysis of the data to enable the reader to understand the current economic trends in the State. These 12 states account for 66 per cent of the geographical area, 71 per cent of the population and 70 per cent of the GDP of India.

21. Mergers & Acquisitions: Mergers & Acquisitions Service provides you with detailed and up-to-date information on M&As in India. The document is presented in a simple and analytical framework to reveal the current trends and future prospects in M&A activity. CMIE delivers its databases and its research work in the form of information products.

22. Macroeconomics : Economic Intelligence Service provides an overview and a prognosis of the Indian economy through a Monthly Review of the Indian Economy and provides 12 annual volumes of detailed reference data. The Monthly and the 12 volumes are available in print form as well as in pdf file formats. You can conduct your own research using the Business Beacon - a database of macroeconomic time series data. International Economics is a database containing macroeconomic time series data on individual countries. Both these databases are updated daily.

23. Bankingrules.com : Bankingrules.com is a comprehensive compilation of laws, directives, rules and notifications of all the finance, tax, banking and commercial authorities. It has nearly 300 Acts and Circulars from over 17 regulatory bodies. In addition there are articles, tutorials, jobs available etc. that you can access. The site is updated every day and is therefore current.

24. Business Monitor Online: Business Monitor International (BMI) Online Store, offering a comprehensive range of products and services designed to help senior executives, analysts and researchers assess and better manage operating risks, and exploit business opportunities, across 175 markets.

Industry Analysis BMI covers 17 industry verticals through a portfolio of services, including Daily Alerts, monthly regional Insights, and in-depth quarterly Country Forecast Reports. This service is available in the following formats: directories, CD-ROMs and online database access.

25. Ebrary: ebrary® is a leading e-content services and technology provider that has been serving the library, publishing, and corporate markets since 1999. More than 1,400 customers around the world serving more than 12.5 million end-users use the ebrary platform to acquire e-content from leading publishers as well as distribute their own PDF content online.

All documents in the ebrary platform can be cross-referenced, are full-text searchable, and integrate with other digital resources in the library and on the web through the ebrary Reader™ and InfoTools™ software. ebrary offers several viewing options, including our new Java-based Reader with QuickView™ and legacy (ActiveX) Reader plugin.

26. EconLit™ w/Full Text : EconLit™ with Full Text contains all of the content available in EconLit, plus full text for more than 400 publications including titles from the American Economic Association such as: American Economic Review, Journal of Economic Literature, and Journal of Economic Perspectives. This database will also include many non-English full-text journals in economics & finance. The full text titles can be searched using a publications index, created to allow ease of access to this material. EconLit, the American Economic Association's electronic database, is the world's foremost source of references to economic literature. EconLit, adheres to the high quality standards long recognized by subscribers to the Journal of Economic Literature (JEL) and is a reliable source of citations and abstracts to economic research dating back to 1969. It provides links to full text articles in all fields of economics, including capital markets, country studies, econometrics, economic forecasting, environmental economics, government regulations, labor economics, monetary theory, urban economics and much more.

27. Harvard Manage Mentor: is the ultimate just-in-time reference tool delivering advice on more than 30 business topics right to your desktop. It is available as a full program for both individual and site licenses. Now, you can get the same tips, tools and tactical advice on just the topics you need in a convenient, portable CD-ROM format for individual use.

28. ISI Emerging Markets : ISI Emerging Markets delivers electronic information products by subscription to institutional customers around the world. Through its network of 29 offices in 27 countries, it provides hard-to-get information covering more than 80 emerging markets. Flagship products include CEIC Data, the Emerging Market Information Service (EMIS), the Islamic Finance Information Service (IFIS), IntelliNews, ISI Compliance Edition, and ISI Deal Watch. ISI's website is www.securities.com.

29. J-STOR: JSTOR has created a high-quality, interdisciplinary archive of scholarship, is actively preserving over one thousand academic journals in both digital and print formats, and continues to greatly expand access to scholarly works and other materials needed for research and teaching globally.

- Arts & Sciences I Collection (119 titles)
- Arts & Sciences II Collection (124 titles)
- Business Collection (47 titles)

A digital archive providing access to over 47 business journals. Most of the journals covered are from the first volume till 1998.

30. Sage : SAGE publishes journals in Business, Humanities, Social Sciences, and Science, Technology and Medicine. IIMA has access to more than

31. PsycARTICLES: The database contains more than 100,000 articles from 59 journals - 48 published by the American Psychological Association (APA) and 11 from allied organizations. Coverage spans 1894 to present.

32. MAGINDIA.COM: MAG India contains database Indian advertising industry i.e. outdoor, print, TV, radio, internet or any other medium. At present, it has 2 lakh ads of various brands spanning over 10 years across different product categories in its physical archive. There are more than 45,000 agency creatives (across 550 plus product categories and 2000 plus brands) available online. In addition, there's the whole collection of Mudra ads since its inception in 1980.

33. TvAdIndx (iBanklive): Online archives of 500,000 Indian, International TVCs, Press Ads and Marketing News. Instantly search, preview and download 40-year material. Media-Monitoring Advertising Library updated daily

34. Asian CERC: An exclusive database on Indian industry and corporate information.

ICRA : ICRA industry research is leveraged on its extensive sectoral knowledge that covers a diverse spectrum of industries. The industry studies, which comprise of the Industry Watch Series, present an in-depth analysis of different sectors / industries, providing an insight into industry competitiveness, the imperatives of succeeding in a global scenario and the relative positions of industry participants.

35. Blackwell Synergy (Merged into Wiley InterSciences from July 2008)

Blackwell Synergy has full-text articles from the journals in various subjects like Medicine, Science, Social Science and the Humanities. At present there are 372 full-text journals are covered in the collection with last ten year's access. Back-files containing all previous volumes of 49 titles are also available.

Wiley InterSciences (Incudes BLACKWELL Journals from July 2008)

After merger of Blackwell into Wiley, IIMA has more than 460 journals including Blackwell HSS and AGRI collection. Wiley InterSciences collection includes 33 titles subscribed under IIM Consortia.

36. Project Muse : Project MUSE is providing 100% full-text, affordable and user-friendly online access to over 380 high quality humanities and social sciences journals from over 60 scholarly publishers.

37. Indiastat : Indiastat is the authentic source for Indian statistics collected from the best sources for information and statistics on India. Within huge database, user can easily surf through half-a-million pages that contain socio-economic statistical data and useful information on India.

38. Taylor & Francis: Taylor & Francis, founded in the City of London in 1798, is the oldest commercial journals publisher in the world, and one of the leading global academic publishers. We subscribed 42 peer-reviewed journals on Economics, Business, finance, and allied subjects.

39. Indlaw.com: INDLAW is India's fully functional web enabled largest legal, tax and regulatory resource base. It is an important research tool for lawyers, policy

makers, executives, bankers, chartered accountants, company secretaries and students who seek easy access to critical legal data from one single comprehensive source. INDLAW's extensive database with its quality content and intuitive search engines offers its users comprehensive solutions to legal and tax queries. INDLAW's legal research services are accessible from anywhere in the world. Comprehensive database of judgments, case laws, reports, legislations, forms, notifications, circulars regarding legal, tax and regulatory issues in India.

Conclusion

The essence of management, IIMI believes, lies in managing one's own ambitions and forging ahead consciously. (Quite a radical definition, this one) "A strong theoretical foundation is the basis of good corporate practice" - this, coupled with grounding in management as it is practiced, is the underlying theme of the Post Graduate Programme (PGP). Spanning two years, the programme is benchmarked against similar programmes of the best business schools in the world. Experiential learning, IT orientation, and Sensitivity Social Sensitivity are some of the unique features of the programme. To back this up IIM Indore has a solid infrastructure ranging from a 193-acre campus to a strong IT backbone to the latest in teaching aids.

This paper has sought to briefly outline the principal areas, which affect IIM, Indore library abilities to access scholarly information in digital form. It has highlighted technical and infrastructural issues external to IIM, Indore library, in the form of national and regional broadband connections and networking, in addition to those matters within universities, which influence their ability to manage and make use of scholarly information delivered via the internet. The emphasis of many prior studies and programmes seeking to improve access to information has been on the technological and infrastructural aspects. Much greater attention now needs to be focused on how the resources that are now available to IIM, Indore library are incorporated into the teaching and research activities of their researchers, lecturers and students, if access is to be translated into use, and use into a strengthened research system and a high-quality teaching and study environment.

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Marketing of information and Information Literacy

R. Perumal*

Abstract

Marketing is important in the 21st century to introduce any product, even if it is a good quality. Without marketing it is not possible to reach the targeted customer, Due to the advancement of information Technology and communication, it will reach easily the target group. It is not exclude the information product. For choosing the product or information, the user needs knowledge about the product or services available in the library. The literacy program helps the user to understand the needs of information, where will you get it and evaluate the information. The information literacy helps the user to understand the above. Information Literacy and marketing of information is mutually helpful to one another.

Key words: Marketing, Literacy, Information Literacy, Marketing of Information.

Introduction

If anything given to a person without any cost for that, there is no value. When you pay something for that then the value of the product is more. This is applicable to library also. When any service without any price has no value. Secondly, the running of library also very high, the library budget shrinking year after year. Thirdly, the cost of new services is more. For sustainability, the marketing of information is necessary. For the users point of view they should know, what are the service and information available in the library, the information literacy help the student understand about the library. Now the information available in different sources in different forms like CDROM, DVD, DATABASE, WEBSITES, INTERNET etc. Therefore, the user doesn't wants to depend upon the library for their information needs. It is available in 24 x 7. They can get it through their desktop without moving from their table. The information availability is bombarded the users. They could not understand which is useful for their information needs. The librarian is specialized in this field, and can help the users.

Review of literature

Regardless of the library, the need to develop customer centered and strategic market planning has now become part of effective library management (Lee, 2000). It has been observed that unlike in past when libraries have failed to market their services largely because of the notion that libraries were the natural place to which to turn to fulfill information needs. Today they are under pressure to justify their existence through provision of quality service based on customer orientation (Leisner, 1995). Libraries have also been accused of equating marketing with activities such as promotion , advertising and public relations which are aimed at convincing their users that the existing service are inherently good for them rather than finding out and satisfying user's real needs (Bborchardt,1997).

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Marketing of Information Services

The focus of every library is customer service, which is another term for marketing (Nims, 1999). Marketing is initial to the success and continued existence of a library (Siess, 2003). Effective marketing provides the means by which users are made aware of the services of the library and their values (Martey, 2000).

Information Literacy

Information Literacy is set of abilities requiring individuals to “recognize when information is needed and have the ability to locate, evaluate and use effectively the needed information.

According to American Library Association “To be information literate, a person must be able to recognize when information is needed and have the ability to locate, evaluate, and use effectively the needed information.”

According to Chan, an information skilled student must be able to:

- Recognize a need for information.
- Know how to accurately identify and define the information need.
- Know how to locate information effectively.
- Know how to organize, analyze, interpret and evaluate information.
- Incorporate selected information in to his/her knowledge base.
- Use information effectively to accomplish a specific purpose.

According to Burchinal (1976) information Literacy as a skills and linked information literacy with

- Skills that include locating and using information.
- The use of information for problem solving and decision making and
- Efficiency and effective information location, utilization.

Information Literacy Standard

Association of College and Research Libraries (ACRL) Information Literacy competency standard for Higher Education:

- The information literate student determines the nature and extent of the information needed.
- The information literate student accesses needed information effectively and efficiently.
- The information literate student evaluates information and its sources critically and incorporates selected information into his /her knowledge base and value system.
- The information literate student individually or as a member of a group, uses information effectively to accomplish a specific purpose.
- The information literate student understands many of the economic, legal, and social issues surrounding the use of information and accesses and uses information ethically and legally. (ACRL, 2000)

Use of information literacy

Too much of information can create a barrier in our lives. It is called as Data smog. The term data smog coined by David Shenk. This data smog is produced by the amount of information, the speed at which comes to us from all directions. The need to make fast decisions and the feeling of anxiety that we all making decisions without having all the information, that is available or that we need.

Information Literacy is the solution to Data Smog. It allows us to cope by giving us the skills to know when we need information and where to locate it effectively and efficiently. It includes the technological skills needed to use the modern library as a gateway to information. It enables us to analyze and evaluate the information we find. Thus giving us confidence in using that information to make decision or create a product.

Marketing Strategies

Creating webpage: Creating a web page for marketing the information to the users, which is an effective tool for promoting library service and resources as the page will provide organized information. The web page gives welcome message to the users.

WebOPAC: Which is helpful to find out the information of materials available in the library? The users can access the information about the materials available in the library from any where in the world.

Blog: Advancement of the web, the librarian can use the blog for the communication. The information about the library and the latest arrival can be put in the Blog. The blog service will help the librarian to promote the library marketing. The blog service promotes two communications between the users and the librarian.

Social Networking: Social networking like facebook, twitter also help the librarian to promote the marketing of information. Social networking spread the information quickly among the users of the library. The information about the library and new arrivals can be added in the social networking.

Email list of users: Emails are preferred method of communication. In Email, including a message and introduction to library services could be sent to all new users. Email highlighting new library resources and featuring tips on finding information are of great value at the critical stage.

Use of library walls: The library wall can be utilized for advertising the information about the library service and late arrival of the library. Here the librarian's name and photograph of the librarian can be displayed. The user can easily recognized the librarian and easy to approach for their help.

Use of library notice board: The same way like the library wall, the library notice board also can be utilized. Here the latest arrival of the library and service provided in the library can be displayed.

Attending academic lectures: The librarian can attend the lectures and can explain the resources available in the library, services available to the users, in this way librarian can promote the marketing of information.

Information literacy for the users

Information literacy program helps the students to understand the research skill and critical thinking. The information literacy helps the student to understand, When they need information for their research, where will get it, and to understand the legal and ethical issues of the information. Before going to start information literacy, we have to understand the users properly. What is their needs, how to teach information literacy, what type of technology they are using. Nowadays the users need instant information for their problem. The information available in different forms from different sources. It is confused to select the information. So the information literacy help the users to solve the problem. The information literacy can be taught in the following methods.

1. **Library orientation program:** Library orientation helps the students to understand the library properly. The orientation program helps the fresh users to make relation with the library staffs, to understand the library procedures.
2. **Library resource information:** The library resource information helps the students to recognize the materials available in the library. How they are arranged in the library.
3. **Searching the catalogue:** The users will get information about the library catalogue. How to search library catalogue. Nowadays OPAC is used in most of the library. The students wanted to know what is OPAC, how to search through OPAC. What is author catalogue? What is title catalogue? What is subject catalogue? Everything will be covered in information literacy program.
4. **Locating information:** In the library the students can select the books through the library catalogue or with the help of librarian. Searching of information from the reference books, they need some training. Subjects like law, searching case laws from journals/ reports need help. The new comers could not understand how to search case laws from the journals.
5. **Critical thinking :** The users needs critical thinking about the subject. In research the user's needs to take decision on the problem. Here they are using different subject, out of this they have to take decision.
6. **Providing follow up session:** After the information literacy, program the follow up session is important. Without follow up session, the user cannot utilize the literacy properly. Because the user at the time of literacy program could not understand properly. The follow up session give some time clear their doubt.

Conclusion

For promoting marketing of information service in the library, the information literacy program is very important, where the users understand what the information

they are looking for. Now without advertising nothing can be implemented or promoted. The information literacy gives the idea about what type of information they are searching. From where will such type of information is available. What are the legal and ethical issues of the information? The literacy program gives information to the users. For promoting marketing of information, the information literacy is very important. In the 21st century, the library depends upon on the technology and communication.

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ग्रंथालय सूचना सामग्री का परिरक्षण एवं संरक्षण : एक विवेचनात्मक अध्ययन (Preservation and Conservation of library Materials: A Descriptive study)

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सार (Abstract)

ग्रंथालय की प्रलेखीय तथा अप्रलेखीय सामग्री, उनके प्रकार तथा उन्हें क्षति पहुँचाने वाले कारकों की विवेचना करता है। रचना सामग्री के संरक्षण हेतु विभिन्न रसायनों का चयन उनका अनुप्रयोग एवं उपयुक्त परिस्थितियों के चुनाव हेतु सूचना प्रदान करता है। संरक्षित प्रलेखीय एवं अप्रलेखीय सामग्री के उचित भण्डारण हेतु विभिन्न विधियों की भी विवेचना करता है। साथ ही सूचना सामग्री को दीर्घगामी बनाने हेतु तकनीकों को भी प्रस्तुत करता है।

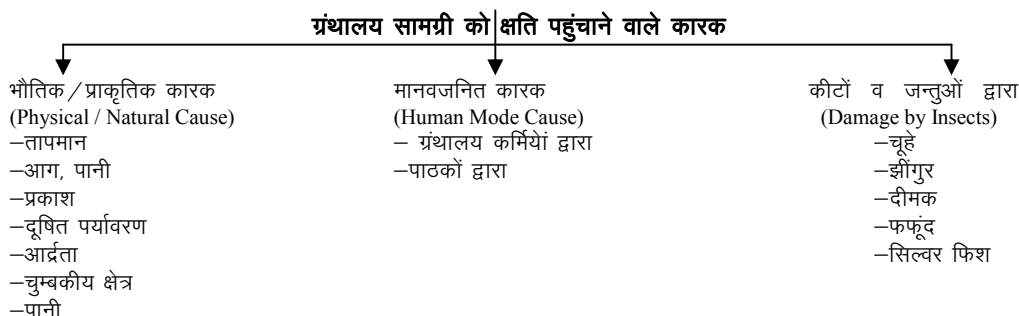
प्रमुख शब्द (Keywords): परिरक्षण, संरक्षण, चुम्बकीय क्षेत्र, पर्यमीगेशन, माइक्रोफार्म, रासायनिक उपचार, जैविक कारक, ग्रंथालय सामग्री को क्षति पहुँचाने वाले कारक

प्रस्तावना (Introduction)

ग्रंथालय एक ऐसा स्थान होता है जहाँ पर सूचना एवं ज्ञान का भंडार होता है यह सूचना प्रिंट एवं नॉन प्रिंट रूप में उपलब्ध होती है। ग्रंथालय कर्मचारियों का यह दायित्व होता है कि वह इस महत्वपूर्ण सूचना सामग्री के परिरक्षण एवं संरक्षण के महत्व को समझते हुए इसके लिये पर्याप्त व्यवस्था करें ताकि इस सूचना का लाभ भविष्य के उपभोक्ताओं को भी प्राप्त हो।¹ ग्रंथालय सामग्री का परिरक्षण एवं संरक्षण एक सुनियोजित कार्यव्यवस्था है। जिसके अंतर्गत तापमान, आर्द्रता, वायु, अम्ल, धूलकण तथा कीटों इत्यादि पर नियंत्रण तथा प्राथमिक एवं विशिष्ट उपचार संबंधी गतिविधियाँ सम्मिलित होती हैं।

ग्रंथालय सामग्री को क्षति पहुँचाने वाले कारक (Cause for damage of Library Materials)

ग्रंथालय सामग्री को क्षति पहुँचाने वाले कारकों को निम्न रेखाचित्र द्वारा समझ सकते हैं।



I- भौतिक / प्राकृतिक कारक (Physical/Natural Cause)

भौतिक / प्राकृतिक कारकों के अन्तर्गत निम्न प्रमुख कारक आते हैं।

1. तापमान (Temperature)

अधिक तापमान से ग्रंथों के पृष्ठ स्वयं ही क्षतिग्रस्त होने लगते हैं तथा ग्रंथों की आयु कम होने लगती है।

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उपाय (solution) ग्रंथ भंडार कक्ष 22° C से 25°C (72°F से 78 °F) तापमान वाला होना चाहिए जिसके लिए वातानुकूलकों (Air conditioners) का प्रयोग किया जाना चाहिए।

2. आग (Fire)

आग एक ऐसा कारक जिससे क्षतिग्रस्त होने पर ग्रंथों का निस्तारण (Salvage) आसानी से संभव नहीं है अतः इसकी रोक-थाम के लिये निम्न प्रयास होने चाहिए।

उपाय (Solution) -

- (A) ग्रंथालय की बिजली लाइनों की नियमित रूप से जाँच होनी चाहिए।
- (B) अतिरिक्त विद्युतीय लोड नहीं बढ़ने देना चाहिये।
- (C) ज्वलनशील पदार्थों को ग्रंथालय की पहुँच से दूर होना चाहिए।
- (D) अग्निशामक यंत्रों को ग्रंथालय में स्थापित किया जाना चाहिए।
- (A) आपातकालीन स्थिति से निपटने के लिये कर्मचारियों को प्रशिक्षित करना चाहिए।

3. पानी (Water)

पानी द्वारा क्षतिग्रस्त होने पर ग्रंथों का निस्तारण कठिनाई से होता है अतः इसकी रोकथाम के लिए निम्न उपाय होना चाहिए।

उपाय (Solution) -

(a) पानी की पाइप लाइनों से पानी के रिसाव की नियमित जांच हो। (B) पानी की पाइप लाइने भण्डार क्षेत्र से होकर नहीं गुजरना चाहिए। (C) जल के निकास की उचित व्यवस्था हो (D) ग्रंथालय भवन सामान्य सतह से 4-5 फीट ऊपचा होना चाहिए।

4. तीव्र प्रकाश (Direct Sunlight) ग्रंथों पर सीधे तीव्र प्रकाश पड़ते रहना से पेज चटकने लगते हैं

उपाय (Solution) - (a) प्रलेखों को तीव्र प्रकाश से दूर रखना चाहिए (b) खिड़कियों पर पर्दे होना चाहिए। (c) वातानुकूलकों का प्रयोग किया जाना चाहिए।

5. दूषित वातावरण (Dirty Atmosphere) धूल, धुँआ, नमी व अम्लीयता युक्त वातावरण ग्रंथों को क्षति पहुँचाता है

उपाय (Solution) (a) ग्रंथालय की नियमित डास्टिंग (Dusting) की जानी चाहिए जिसके लिए वेक्यूम क्लीनर का प्रयोग उचित होगी (b) खिड़कियों पर शीशे होना चाहिए (c) ग्रंथालय में नमी नहीं बढ़ने देना चाहिए।

6. आर्द्रता (Humidity)

नमी अथवा आर्द्रता की अधिकता से ग्रंथों में फफूंद तथा कीटों के पैदा होने की सम्भावना रहती है।

उपाय (Solution) - (a) अधिक नमी को नियंत्रित करने के लिए जल निकासक रसायनों जैसे - हाइड्रस कैल्शियम, क्लोराइड, क्लोराइड तथा सिलिका जैल का प्रयोग किया जा सकता है।² 20-25 घन मीटर कक्ष के लिए सिलिका जैल को तस्तरियों भर कर रख जाता है 3-4 घण्टों में यह नमी को सोख लेती है (b) ग्रंथालय सीलन (Dampness) से मुक्त होना चाहिए इसके लिए खुली हवा की आवाजाही होती रहे। (c) अंगीठी अथवा हीटर का प्रयोग भी किया जा सकता है। (d) निराम्लीकरण (Deacidification) हेतु विभिन्न विधियों जैसे—Morpholine Process (Barrow's) से फेज डिएसिडी फिकेशन (Vapour phase Deacidification) डायथाइल जिंक पद्यति (Diethyl Zinc Process) इत्यादि का प्रयोग किया जा सकता है। चूंकि उपरोक्त रसायन मंहगे होते हैं इसलिए कुछ सस्ते रसायनों जैसे - कैल्शियम -क्लोराइड, कैल्शियम वाई कोबोर्नेट, अमोनिया इत्यादि का भी प्रयोग किया जा सकता है (e) ग्रंथालय भवन की सापेक्षित आर्द्रता 47 प्रतिशत होना चाहिए।

(7) चुम्बकीय क्षेत्र (Magnetic field)

चुम्बकीय क्षेत्र ग्रंथालय की इलेक्ट्रॉनिक सामग्रियों जैसे – ऑडियो – विजुअल टेप, चुम्बकीय फीतों, कैसेट्स इत्यादि को क्षति पहुँचाता है

उपाय (Solution) – (a) इलेक्ट्रॉनिक सामग्री को विद्युतीय मीटर अथवा अन्य चुम्बकीय वस्तुओं से दूर रखना चाहिए। (b) इलेक्ट्रॉनिक सामग्री को खुला नहीं छोड़ना चाहिए।

II- मानव जनित कारक (Human made cause) मानवीय लापरवाही से भी ग्रंथालय सामग्री को व्यापक क्षति पहुँचती है यह दो तरह से होती है।

1- कर्मचारियों द्वारा (Damage by the staff) कर्मचारियों द्वारा जाने-अनजाने ग्रंथों की क्षति हो ही जाती है जैसे ठीक से पुस्तकों का न पकड़ना, फेंक कर रखना, ग्रंथों को टेडा रखना, ग्रंथों को पटक देना, फोटोकॉपी के दौरान मोड़ना इत्यादि।

उपाय – (Solution) (a) ग्रंथों को सावधानी से उठाना एवं रखना (b) सैल्व पर बुक सर्पोटर का इस्तेमाल करना चाहिए (c) सैल्वों की ऊँचाई 7 फीट से अधिक न हो। (d) ग्रंथों को पटकना एवं मोड़ना नहीं चाहिए।

2- पाठकों द्वारा क्षति (Damage by the Readers) प्रायः स्वार्थी व अनुशासन हीन पाठकों द्वारा ग्रंथों के पेजों को फाड़ना, मोड़ना, उन पर लिखना तथा उनकी चोरी करना जैसे अनुचित कार्य किये जाते हैं।

उपाय (Solution) - (a) ग्रंथालय की खिड़कियों में जाली होना चाहिए। (b) आवाजाही के लिए एक ही मुख्य द्वार हो। (c) - मुख्यद्वार पर सुरक्षाकर्मचारी तैनात हो। (d) यांत्रिक विधियों जैसे RFID इत्यादि की व्यवस्था हो। (e) ग्रंथालय में फोटोकॉपी मशीन की व्यवस्था हो।

3- कीटों व जन्तुओं द्वारा क्षति (Damage by the Insects) - विभिन्न कीटों व जन्तुओं द्वारा ग्रंथालय सामग्री को अप्रत्यक्ष रूप से क्षति पहुँचती है जिनमें चूहे, झींगुर (cricket), दीमक (White Ant), सिल्वर फिश, फफूंदी (Mould fungi) इत्यादि ग्रंथों को इस स्थिति में पहुँचा देते हैं कि उनका निस्तारण आसानी से संभव नहीं हो पाता है।

उपाय (Solution)- मिट्टी का तेल व क्रियाजोट ऑयल 1:10 के अनुपात में मिलाकर फर्स पर छिड़कना चाहिए। (b) - अलमारियों में कपूर की गोलियाँ रखी जा सकती हैं। (c) - चूहे को पकड़ने के लिए चूहेदानी व चूहामार दवा का प्रयोग किया जा सकता है। (d) - झींगुर व दीमक से बचाव हेतु डी.डी.टी. का प्रयोग किया जाना चाहिए। (e) - बोरिक अम्ल व सोडियम फ्लोराइड का भी इस्तेमाल किया जा सकता है। (f) - दीमक से बचाव हेतु कार्बनडाईसल्फाइड व कार्बन टेट्राक्लोराइड नमक रसायन का छिड़काव किया जाना चाहिए। (g) - नीम की पत्तियों को रखने से भी कीट पनप नहीं पाते हैं। (h) - ग्रंथों की जिल्दबंदी काले रंग की न हो क्योंकि काला रंग कीटों को आकर्षित करता है। (i) - ग्रंथालय भवन की आर्द्रता 70 प्रतिशत से अधिक व तापक्रम 35° – 38° C के बीच होने पर फफूंदी की सम्भावना होती है। अतः भवन का तापमान 22° – 25° के आसपास होना चाहिए (j) कीटों से रक्षा हेतु फ्यूमीगेशन (Fumigation) अर्थात् धुँआ पद्धति का प्रयोग भी किया जा सकता है। (k)- वातावरण में अधिक आर्द्रता व शुष्कता नहीं होना चाहिए।

फ्यूमीगेशन पद्धति (Fumigation process) - फ्यूमीगेशन एक धूमन प्रक्रिया है जिसके द्वारा हानिकारक कीटों को भगाया जाता है। सामान्य तौर पर नीम की पत्तियों को जलाकर धुँआ पैदा किया जाता है परन्तु वर्तमान में विभिन्न रसायनों जैसे – कार्बन डाईसल्फाइड, कार्बन टेट्राक्लोराइड मिथाइल ब्रोमाइड पेराक्लोरो बेजीन, इत्यादि का प्रयोग किया जाता है।³ इसके अंतर्गत निम्न चरण होते हैं।

प्रथम चरण – फंगस व कीटों से प्रभावित ग्रंथों को फ्यूमीगेशन हेतु पृथक रख लिया जाता है।

द्वितीय चरण – ऐसे रसायनों को चुना जाता है जो ग्रंथ के कागज के रंग से स्याही को हानि न पहुँचायें। जैसे

- थाइमेल –100–150 ग्राम प्रति मी. स्थान हेतु
- कार्बनटेट्राक्लोराइड तथा इथलीन डाई क्लोराइड का मिश्रण
- पेरा डाइक्लोराइड तथा इथलीन डाइक्लोराइड का मिश्रण

तृतीय चरण – एक बॉक्स या अलमारी जो कि लकड़ी या स्टील की बनी होती है तथा जिसमें अंदर की छोटे-छोटे छिद्र होते हैं जिसमें धुँआ एक स्थान से दूसरे स्थान तक जा सकता है उस चैम्बर या बॉक्स में ग्रंथों को रखा जाता तथा दरवाजा बंद करके निर्वात पम्प (Vacume Pump) द्वारा अंदर की हवा को खींच लिया जाता है तथा उचित मात्रा में धुँआ प्रवेश कराया जाता है करीब 24 घण्टे तक इसको बंद रखा जाता है तत्पश्चात धुँए को वापस खींच लिया जाता है तथा स्वस्थ सामग्री को बाहर निकाल लिया जाता है। कवक व कीटों की रोकथाम की यह प्रभावी पद्धति सिद्ध हुई है।

अप्रलेखीय सामग्री का संरक्षण (Preservation of Non book Materials) अप्रलेखीय सामग्री के अंतर्गत स्लाइड्स, फिल्म स्ट्रिप्स, कैसेट्स, सी.डी., ग्रामोफोन रिकार्ड्स इत्यादि आते हैं उपरोक्त सामग्रियों के संरक्षण हेतु राष्ट्रीय एवं अंतर्राष्ट्रीय स्तरों पर मानक स्थापित किये गये हैं। जैसे – आइ.एस.ओ., बी.एस.आई. (Britain), ए.एन.एस.आई. (U.S.A.) इत्यादि ने अपने अपने मानक स्थापित किये हैं।⁴

अप्रलेखीय सामग्री प्रायः दो प्रकार से क्षतिग्रस्त होती है प्रथम भौतिक कारकों द्वारा द्वितीय मानवीय लापरवाही द्वारा भौतिक कारकों के अंतर्गत तापमान (Temperature) की अधिकता व न्यूनता, तीव्र व सीधा सूर्य का प्रकाश लगना, धूल व गन्दगी लगना, अधिक सापेक्षिक आर्द्रता का होना, चुम्बकीय क्षेत्र के सम्पर्क में होना इत्यादि सूचना सामग्री को क्षति पहुँचाता है। जबकि मानवीय कारकों में ग्रंथालय कर्मियों व पाठक द्वारा सामग्री का ठीक से रखरखाव न करना प्रमुख कारण है।

अप्रलेखीय सामग्री के परिरक्षण एवं संरक्षण के उपाय – (Solution for preservation & Conservation of Non document Materials) वर्तमान में अप्रलेखीय सामग्री विभिन्न प्रारूपों में उपलब्ध है⁵ जैसे

I- फिल्म मीडिया (Film media) फिल्म मीडिया का निर्माण पोलिस्टर आधारित सामग्री से होता है फिल्म मीडिया के निम्न प्रकार उपलब्ध है।

(a) माइक्रोफॉर्म (Micro Form) किसी बड़े प्रलेख अथवा चित्र को जब मशीन द्वारा छोटे रूप में परिवर्तित कर दिया जाता है तब वह माइक्रोफॉर्म कहलाता है। इसके विभिन्न रूप हो सकते हैं जैसे— अपर्चर कार्ड, माइक्रोफिक, अल्ट्राफिक, रोल फिल्म इत्यादि इनको पढ़ने के लिए उपकरणों का प्रयोग किया जाता है।

(b) फिल्म स्ट्रिप (Film Strip) : यह कई सारी छवियों अथवा चित्रों का समुदाय होता है यह दो प्रकार का होता है एकल अथवा अर्धफ्रेम में तथा द्वितीय पूर्ण फ्रेम में।

(c) स्लाइड्स (Slides) : यह पारदर्शक प्लास्टिक सामग्री की बनी होती है यह 35 मि.मि., 250 मि.मि. इत्यादि फॉर्मेट में पायी जाती है इसका उपयोग ऑवर हेड प्रोजेक्टर द्वारा किया जाता है

(d) सिने फिल्म (Cine film) : यह प्रायः 8 मि.मि. तथा 35 मि.मि. तथा 35 मि.मि. की चित्रों की एक क्रमबद्ध श्रृंखला होती है जिसे प्रोजेक्टर द्वारा तीव्रगति से पर्दे पर उभारा जाता है।

संरक्षण के उपाय (Solution for Preservation)

1. फिल्म मीडिया को धूल के सम्पर्क में आने से बचना चाहिए।
2. भवन का तापमान 750 F तक सीमित होना चाहिए इसके लिए वातानुकूलकों का उपयोग किया जाना चाहिए
3. फिल्म को हमेशा कन्टेनर में रखना चाहिए
4. फिल्म को हमेशा किनारों से पकड़ना चाहिए।
5. फिल्म मीडिया को सदैव सुरक्षित उपकरण अथवा प्रोजेक्टर में ही चलाना चाहिए।
6. इसके उपयोग हेतु कर्मचारी प्रशिक्षित होना चाहिए।

(II) टेप्स (Tapes) टेप्स पोलिस्टर पर आधारित ऑक्साइड, लोहा तथा क्रोमियम की परत चढ़ा कर चुम्बकीय गुणों से परिपूर्ण किया जाता है इसके अंदर संवादों को रिकार्ड किया जाता है तथा प्लेबैक मशीन द्वारा पढ़ा या देखा जाता है⁶

संरक्षण के उपाय (Solution for Preservation)

- टेप्स को हाथों से नहीं छूना चाहिए
- इन्हें किनारों से पकड़ना चाहिए।
- धूल से रक्षा करना चाहिए।
- इनको रखने के लिए कन्टेनर का प्रयोग करना चाहिए।
- अधिक तापमान से ये चिपक जाते हैं अतः तापमान 65°F से 68°F तक होना चाहिए।
- इनको हमेशा खड़ा करके रखना चाहिए।
- चुम्बकीय उपकरणों जैसे विद्युत मोटर इत्यादि से दूर रखना चाहिए।
- इनका भण्डारण क्रमबद्ध रूप से हो।
- इनका समय-समय पर उपयोग होते रहना चाहिए अन्यथा यह कड़े होकर टूटने लगते हैं।
- प्रकाश से बचाना चाहिए।

(III) **डिस्क (Disc)** सी.डी.रोम व फ्लॉपी का वर्तमान में अत्यधिक प्रचलन हो रहा है फ्लॉपी के प्रचलन में कमी आ रही है क्योंकि सी.डी. और डी.वी.डी इसकी तुलना में अधिक सामग्री संग्रहित कर सकती है।

संरक्षण हेतु उपाय (Solution for preservation)

- डिस्क को सूर्य के प्रकाश व उच्च आर्द्रता से बचना चाहिए
- डिस्क को भी कन्टेनर में संग्रहित करके रखना चाहिए
- धूल व गंदगी से बचाना चाहिए
- चुम्बकीय सामग्री से दूर रखना चाहिए।
- घर्षण न होने पाये इसका ख्याल रखना चाहिए।
- इन्हें हमेशा क्षैतिज अवस्था में रखना चाहिए।
- दो डिस्कों को एक दूसरे के ऊपर नहीं रखना चाहिए।

अप्रलेखीय सामग्री के संरक्षण हेतु ग्रंथालयभवन की सापेक्षिक आर्द्रता (Relative Humidity) 47 प्रतिशत निर्धारित की गई⁷ तापमान 65°F – 68°F निर्धारित किया गया है ध्यान रहे कि तापमान 10°F से नीचे न आये इस अवस्था में इस प्रकार की सामग्री अपने गुणधर्म त्यागने लगती है।

प्रलेखीय सामग्री का रासायनिक उपचार (Chemical Treatment of Document Materials)

प्रलेखीय सामग्री की आयु व मजबूती उसके विभिन्न घटकों जैसे – पेपर, स्याही, तथा सुरक्षा हेतु प्रयुक्त आवरण सामग्री इत्यादि पर निर्भर करता है। साथ ही पेपर, चमड़ा तथा कपड़ा जो कि प्रलेख के निर्माण के समय उपयोग में लाये गये थे उनकी अम्लीयता (Acidity) ग्रंथों के क्षय होने के प्रमुख कारण है।⁸

रासायनिक अनुप्रयोग / उपचार (Chemical Treatment)

पेपर की अम्लीयता को कम करने तथा उसे मजबूती प्रदान करने के लिये निम्न लिखित तकनीकों का प्रयोग किया जाता है।

(1) सूखा पाउडर जैसे क्षारीय रासायनिक नमक (Alkaline Chemical salt). (2) जलीय (Aqueous) अथवा निर्जलीय (Non aqueous) क्षारीय घोल (Alkaline Solutions)

(3) क्षारीय वाष्प अथवा गैसों (Alkaline Vapours or Gases)

ग्रंथों की अम्लीयता को मिटाने के लिए जो विधियाँ प्रयुक्त की जाती हैं उनका चुनाव ग्रंथ की भौतिक अवस्था तथा स्याही की गुणवत्ता पर निर्भर करती है। जैसे – पानी में धुलनीय (Washable) अथवा पानी प्रतिरोधक। प्रक्रिया हेतु जो क्षारीय रसायन प्रयुक्त किये जाते हैं उनमें – कैल्शियम हाइड्रोक्लोराइड (Calcium Hydrochloride) तथा मिथायल मैग्नीशियम (Methyl magnesium), मोरफोलीन (Morph line), मैग्नीशियम हाइड्रोक्लोराइड (Magnesium Hydrochloride), अमोनिया (Ammonia), बेरियम हाइड्रोक्लोराइड (Barium

hydrochloride) डाईइथालजीन (Diethylzine), इत्यादि उपरोक्त रसायन थोड़े मंहगे हैं परन्तु यह पेपर की गुणवत्ता को नहीं पहुँचाते हैं।

जलीय धुलनशील सामग्री हेतु रसायन (Chemicals for Water washable Materials)

निरअम्लीयता की प्रक्रिया करने के पूर्व यह ध्यान में रखना आवश्यक है कि स्याही (Ink) जल से धुलने वाली तो नहीं है यदि है तो इसके लिए जल अवरोधी (Water Protective layer) को लेखन, ड्राइंग, पेंटिंग, इत्यादि पर चढ़ाने के लिए निम्न विलायक (Solvent) उपलब्ध है — सोल्यमवल नायलॉन (Soluble nylon), पालीविनायल ऐसीटेट (Polyvinyl Acetate), पालीविनायल क्लोराइड (Polyvinyl Chloride), एक्रिलिक ऐस्टर्स (Acrylic esters), इसके अतिरिक्त कुछ निष्क्रिय विलायकों (Inert solvents) में प्रमुखतः जायलीन (Xylene), क्लोरोफॉर्म (Chloroform), एसीटोन (Acetone), तथा ट्राई और डाईक्लोरोइथलीन (Tri and Dichloroethylene) इत्यादि का प्रयोग किया जाता है।

उपरोक्त रसायन पेपर की सतह, कोमलता, चमक तथा स्याही इत्यादि पर कोई भी कुप्रभाव नहीं डालते हैं।

जैविक कीटों से सुरक्षा हेतु रसायनिक उपचार (Chemical Treatment to Protect Biological Pests)-

जैविक कीटों से रक्षा के लिए कई प्रकार के रसायन मार्केट में उपलब्ध हैं परन्तु सभी प्रकार के रसायन चाहे वह तरल हों, धूमक (Fumigant) हों अथवा पाउडर के रूप में हों ग्रंथों को क्षति पहुँचा सकते हैं। उदाहरण के लिए ऐसे रसायन जिनमें मरकयूरी (Mercury) तथा आर्सेनिक (Arsenic) की मात्रा है वह पेपर के लिए हानिकारक होते हैं। परन्तु कुछ रसायन जो कि सुरक्षित हैं व पेपर को हानि नहीं पहुँचाते हैं वे निम्न हैं— फफूंदनाशी: थायमोल (Thymol), फोरमेलीन ऑर्थोफेनी (Formalin Orthopheny), सेल्सीलेनिलायड (Salicylanilide) इत्यादि। धूमकों में प्रमुखतः पेराडाईक्लोरोबेंजीन (Paradichlorobenzene), थायमोल (Thymol), फोरमेलीहाइड (Formaldehyde), इथलीन डाईक्लोराइड (Ethylene dichloride), कार्बन टेट्रा क्लोराइड (Carbontetra chloride), कार्बनडाई ऑक्साइड (Carbondioxide), इथलीन ऑक्साइड (Ethylene oxide), मिथाइल ब्रोमाइड (Mryhyl Bromide)।

कीटनाशकों (Insect Repellent) में प्रमुखतः पेराडाईक्लोरोबेंजीन (Paradichlorobenzene), केम्फर (Camphor), नेपथलीन (Naphthalene) का प्रयोग किया जाता है। कुछ रसायनों जैसे डी.डी.टी., लिन्डेन (Lindane), डाईएल्लिड्रिन (Dialdrin), इत्यादि को पेपर के सम्पर्क में आने से रोकना चाहिए क्योंकि यह पायस (Emulsions) खनिज, तेल, व तरपीन (Terpines) से युक्त होते हैं जो कि पेपर पर प्रतिकूल प्रभाव डालते हैं।

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FOSS for Indian Libraries

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Abstract

This article discussed a new integrated library automation software 'ABCD' which is an open source solution available free of cost to all libraries. It caters all present needs of 3D libraries and documentation centers. It covers not only International Bibliographic formats (e.g. MARC) but also local and simple formats dealing with any type of documents. It has excellent indexing and retrieval features based on UNESCO's ISIS technology, a web OPAC, a portal to manage online, offline digital resources and a serials management module. It will be a good solution for the Indian libraries those are not yet started library automation or thinking to change their existing software to new advanced one.

Keywords: Open source software, Library automation, FOSS for libraries, etc

Introduction

Technology is changing fast and new tools based on web 3.0 technologies are available on the net. The user's expectations from the libraries and library staff are changing. Librarians need to provide information services to users with the help of online electronic resources along with print material. Active librarians are conducting Information literacy programs to their users to make them aware about how exactly information should search from the ocean of information available on the Internet, local digital libraries, intranet services, etc

Indian librarians are still looking towards complete solution or software that fulfills all their present needs in Digital era. The percentages of the academic libraries those are fully automated are comparatively less. Open Access Catalogues (OPAC) work as an intermediary between user and information in the libraries. Some libraries are partly automated but cannot publish their OPAC on Internet. Many are yet to start the automation process.

FOSS: Free and Open Source Software

The commercial software tools like VTLS, LIBSYS, etc are advanced and excellent in their own features but are often too costly to afford for small and medium-size libraries. Free Open Source Software (FOSS) tools for integrated library management have become available to librarians under various initiatives such as ABCD, Koha, Evergreen, OPALS, Newgenlib and PMB which provides access to all information mentioned above. Digital library softwares like Dspace, Eprint and Greenstone, CMS Content management systems like Jhoomla, Drupal, and Plone are used by many libraries all over the world.

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To meet the evolving needs of library patrons all libraries are looking to affordable solutions like FOSS. They are more user-friendly, stable and extremely rich in features. Along with that, the cost and flexibility are major reasons for the growing use of these open sources softwares in libraries in India. Many workshops are going on various levels for awareness of these softwares. Here we will see this one more new FOSS available for libraries in brief. I have attended its very first workshop conducted by Dr. Egbert De Smet, Supervisor of this ABCD software for STIMULATE 8 participants at Vrije University, Brussels in the year 2008. Later on I observed tremendous modifications and development in the ABCD technology and the present version of ABCD is almost fulfilling many demands of third generation librarians.

ABCD – “Automation of liBraries and Centres of Documentation” - is an Open Source Integrated Library System developed by BIREME (WHO, Brazil) in collaboration with the Flemish Interuniversity Council, Belgium, using UNESCO's ISIS database-technology. It covers almost all current needs of users as well as librarians.

Aims and Objectives

ABCD aims at providing an integrated library management tool covering all main functions in a library, i.e. acquisitions; bibliographic databases management, users' management, loans management, serials control, online end-user searching on local and external bibliographic databases and library portal. As it is based on ISIS-technology of UNESCO, it carries with it strong textual data management features. It allows bibliographic records copying from the main leading libraries like Library of congress, Oxford University, Yale University, Boston University, etc. through the Z39.50 protocol, which helps libraries to maintain international standards in bibliographical information such as MARC, CEPAL and AGRIS.

Librarians normally don't want to go in detail programming. There for it is designed as a tool for librarians rather than ICT technicians. Only they have to use the 'Formatting Language' of ISIS which allows them to manipulate all data in their databases in a high-granularity way in order to keep full control of it without programming.

Installation and download tips

The software is very easy to install. It contains package of all the necessary soft wares. One can download the software for Windows and Linux platforms. One has to only unzip this folder in writeable space (C drive) of the computer. Links of

Demo for ABCD : <http://abcd.demo.bvsalud.org/>

Download site :

<http://bvsmodelo.bvsalud.org/php/level.php?lang=27&item=13#Download>

Salient Features of ABCD

- The software is fully web-based, so can be used and managed from any current web-browser

- No payment has to be made as it is free open source software but support is based on users-community co-operation
- All main functions of the library management are integrated using the same interface and databases
- Z39.50 facility : records can be downloaded from external library catalogs
- Full MARC 21 compatibility with fields, indicators and subfields defined by Library of Congress
- OPAC with simple Google-like and advanced search like Boolean combinations, truncation, field-limitation
- Gives access to both physical and electronic documents (local as well as on the internet) and managed with same interface
- Librarians can define, edit any new database structure and also copy database structure from existing ISIS-applications
- It is available in many languages like English, French, Spanish, Portuguese while more translations are on their way (as the software offers an easy translation function in its own interface)
- Import and export data in ISO-2709 format and text-formats
- Library portal facility : contents and bibliographic resources (both local and external) can be added easily without HTML-programming
- The basic loan module offers detailed definition of objects and users categories and policies for each combination, fine calculation and calendar definitions etc., while the advanced module adds reservation, 'my library' page multiple loan policy definitions and access to external SQL-based user-data
- Excellent serials management fully implementing the ISSN standard and union catalog function
- Statistical reports generation with graphical presentation of any defined set of variables in the databases.

ABCD Modules

Following are available modules in the ABCD software. Each module has separate login and password. All modules are menu-driven and easy to operate.

1. ABCD Central: It comprises following modules:

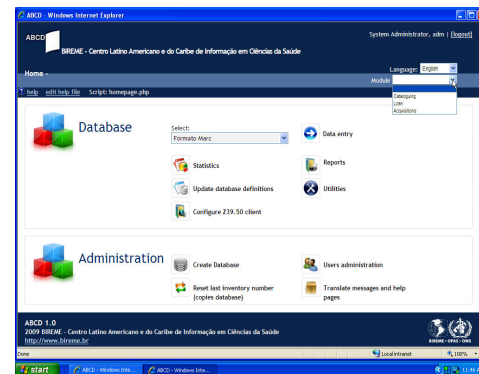
- **Users' administration module** allows specifying user profiles and assigning users to them to define access to any subset of (functions of) different modules and their databases.
- **Database administration module** helps to create new databases from scratch or from the pre-existing database models (like MARC 21, CEPAL).
- **Data entry-cataloguing module** helps to enter data with authority control pick lists, separate handling of subfields (and MARC-indicators) or by importing the record from other libraries through the Z39.50 facility. The indexing definition can be specified in high detail as is the case with the presentation formats. The librarian can generate and print different statistical

reports. One can search records through index listings. One can import or export the database or records.

- **Acquisition module** has four main logical functions :
 - Suggestions : Starting process of obtaining documents comprising New | Approval / Rejection | Bidding | Decision | Overview
 - Purchase orders: the actual acquiring of documents by creating order, Generating order from approved suggestions, checking pending orders and lastly receiving documents.
 - Databases : management of the 4 acquisitions-related databases (suggestions, providers, orders and copies)
 - Administration: configuration, statistics and reports, weeding.
- **Loan module** comprises of :
 - Transactions: contains issue, return, renew, fine calculation, borrowers statement and borrowers history.
 - Databases: maintains databases of borrowers, transactions and fines/suspensions
 - Administration: generates statistical reports of transactions, fines and users.
 - Configuration: allows definitions of catalogs, objects-categories, users-categories, object/user policies, calendars, time-tables and currency units.

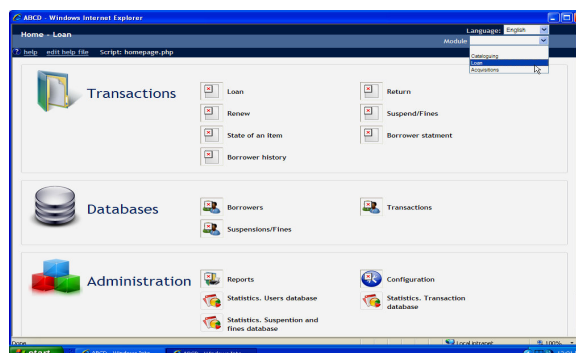
Login details to use module are:

User: abcd, **Password:** adm
Rights: System Administrator,
 Database administrator, Database
 Operators, Loan administrator
User: abcd
Password: dbadm
Rights: Database administrator,
 Database Operators
User: abcd
Password: dboper
Rights: Database Operators



2. ABCD Advanced Loan module

(EmpWeb) caters the advanced loan management system. It is fully based on ISIS-databases, EmpWeb offers for more complex and higher-volume organizations the possibility to store transactions in SQL and retrieve user-data from external SQL (e.g. MySQL, Oracle...) data-sets. Using the JAVA scripting language 'Groovy' one can specify more advanced policy rules (e.g. adding the season as a third dimension on top of user/object categories to define the loan policy). All rules are 'pipe-lined' into a queue of conditions to be met before the transaction is granted, allowing to re-order and re-define the queues. EmpWeb adds a personal 'my-library' page. Users can check their own library-loan status from the OPAC and an online reservation possibility. Connections can be defined per IP-number and with time-tables defined per library within the loans-system if so desired.



3. ABCD OPAC allows us to retrieve of all defined catalogs, databases, and websites with simple, intermediate or advanced interfaces. Results can be displayed in any ISIS-format, including hyperlinks to the original documents for digital library functions, select, print, sent-to-email, bookmark in the major social networks and export to XML.

4. ABCD Site. A CMS (content management system) is provided for the creation of the ABCD Site. It enables to create, manage and publish the portal. The site organizes information in a structure that integrates and interconnects reference databases, specialist directories, events and institutions, full texts collection, catalogues of bibliographical resources available on the local network or internet. It provides OPAC or search tool for all those resources.

Login details to manage site are:

User: adm

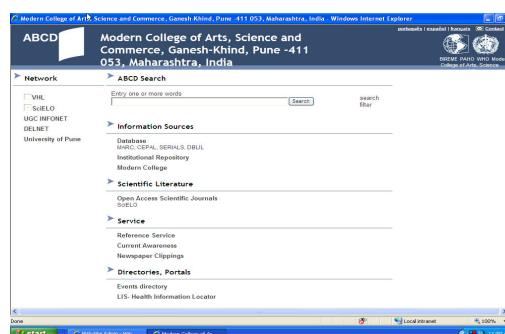
Password: x

Rights: Administrator

User: Database operator

Password: doc

Rights: Contents



5. ABCD Serials Control System (SeCS) It is an advanced management tool for serials or journals (printed and online) of all kinds in a single- or multiple libraries setup.

- **Management of titles:** In this we can add a new serial title and its details (in the full ISSN standard). We can export titles and can send the catalogue of records in Union catalogue of serials. One can search the title through a serials index.
- **Management of Titles Plus:** allows creating and editing records with local administrative information on the serials. Cardex functions are also present.
- **Management of templates:** Allows creating and editing masks or templates of serial publication schemes (e.g. 4 issues per volume etc.)

- **Utilities:** allows user management, library management, statistical reports of serials by library and database. One can get statistical reports of serials holdings (print, online, free, paid, gift subscription, exchanged)

Login details to manage this are

User: admsecs

Password: admsecs

Rights: Administrator

User: edtsecs

Password: edtsecs

Rights: Editor

You can check below few libraries OPAC/site who is already started using ABCD

<http://regional.bvsalud.org/php/index.php>

<http://www.popline.org/>

<http://www.ju.edu.et:8888/site/php/index.php>

<http://213.55.94.33:9090/site/php/index.php>

Conclusion

To cope with the all modern technologies coming up for the benefit of users and librarians, to cope up with the shrinking library budget, cope up with online and offline resources, fulfill users demands some open source soft wares like ABCD offering a nice solution for all types of libraries along with other free open source soft wares. This article covers basic information about ABCD software. Indian libraries can make use of this open source tool for library automation easily without any technological background as it is almost menu driven.

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Problems Encountered by the Faculty Members of Arts and Science Colleges in Kanyakumari District when Accessing E-Resources

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Abstract

This paper attempted to assess and evaluate the barriers encountered by the faculty members of Arts and Science Colleges in Kanyakumari District while accessing e-resources. The authors investigate the use of e-resources and the perceived problems in accessing e-resources through a structured questionnaire. The study revealed that faculty members are aware of e-resources and used the e-resources to meet their information needs. It also lists out the barriers in using and accessing e-resources.

Keywords: E-resources, Barriers in E-resources, Use of e-sources, Faculty Members

Introduction

The technological changes that take place in and around the globe changes the traditional library into e-library. The term 'e-library' and 'e-resources' are well known and frequently used by the academic consists of students and faculty. American Library Association Presidential Committee on Information Literacy (1998) emphasizes the impact of the information age on all people and the need for everybody to become information literate. National Knowledge Commission (2006) has also stressed the importance of sharing knowledge and this process is further strengthened through modern electronic gadgets. The emergence of World Wide Web (WWW) has given an excellent opportunity to find information all over the world. In addition to the internet, there are various platforms sponsored by the Government and Private agencies to extend the accessibility of e-resources.

E-Resources

Electronic Resources is one of the emerging environments in libraries and information communication service. The Electronic resource may be available as offline resources or online resources.

Electronic publishing is getting a tremendous impetus from the publishing industries as well as Library and Information Centres. E-Books, E-journals, E-Magazines, E-Conferences, etc. are some of the leading digital resources that exert a dominant pressure on the publishing world, paving the way to the transition from print to electronic media (Ghosh, 2003).

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Electronic journals, as many considers, are the first developing feature of Electronic Publishing. Lot of journals from almost all fields is currently available electronically via web. The phrase 'e-journals' has been defined variously by different authors. According to **Gangu and Ali (2003)**, the term, 'e-journal' denotes "Any journal existing in an electronic format that embraces all periodicals available electronically as well as in paper copy, including the text of periodicals accessible through online networks and those periodicals distributed in CD-ROM form".

The term Electronic Resources includes any resource available in an electronic format that was accessed and viewed by the users on computer screen. It includes every - thing from e-journals to e-newspapers, e-books, library owned CD-ROMS to web based newscasts.

Need and Significance of the Study

The technological changes found in the library have moved faculty and students from using printed sources to using e-resources, and more specifically the Internet and its various applications as a major source of required information. Before using Internet they must be a computer literate and need to be learn more about the application of ICT tools especially in Internet. Learning a machine language is not so difficult in compared to other learning. However, there are several factors such as age, negative attitude towards modern equipments, anxiety, lack of proper guidance, lack of self interest; techno phobia and lack of internet accessibility force them to keep away from using e-resources. No doubt, the Internet is a boon for higher education and it is a facilitator for teaching, learning and research. Several studies have been conducted on various aspects related to e-journals and e-resources at national and international level among the College Students and among the members of the Faculty. Some of these studies were carried out among the faculty members of United Arab Emirates University on the usage of electronic resources (**Ibrahim, 2004**) and among the academic and research institutions in Tanzania about the major obstacles on using e-resources (**Manda, 2005**). Representative studies on factors that influence the use of library resources by the faculty members at Technolical Educational Institution of Thessaloniki (**Korobili, Tilikidou; Delistavrou, 2005**). At the national level most of the studies were about the awareness of e-resources among the teachers of Arts and Science College of **Saravanan (2007)**, Utilization of e-journals and satisfaction among the users of Engineering Colleges of **Saravanan and Mary (2008)**, promotion and usage of Electronic resources by the student and faculty of Engineering College (**Alwarammal and Sivaraj, 2008**). But a closer analysis of the available studies shows that studies on factors that influence the use of e-resources among the faculty members at Arts and Science Colleges in Kanyakumari District are scanty. The present investigator who has realized the felt need to fill this gaps and hence motivated to take up a survey based study among the teachers of Arts and Science Colleges, since he strongly feels that the effective usage of e-resources have direct impact on the academic productivity of the teachers and which in turn helps to improve their quality of teaching and the class room interaction as well.

Statement of the Problem

Promotion of research and creating new knowledge is the major aim of higher education. Faculties of Arts and Science Colleges are carrying out research works in various disciplines at par with faculties of Universities. Their research work and the class room interactions are positively influenced by the e-resources. There are factors which keep away the faculty from using e-resources. Hence the problem for the present study is entitled as “Problems Encountered by the Faculty Members of Arts and Science Colleges in Kanyakumari District when Accessing E-Resources”.

Objectives of the Study

Objectives framed for the present study are

1. To assess the academic productivity of the faculty of Arts and Science Colleges in Kanyakumari District.
2. To examine the level of computer literacy among the faculty members of Arts and Science Colleges.
3. To analyze the frequency with which the faculty members use e-resources with respect to gender, faculty, designation, years of experience and academic productivity.
4. To analyze the purpose for which e-resources are being used by the faculty members.
5. To identify the barriers encountered by the faculty members when using e-resources.

Hypotheses

Hypotheses of the present study include the following

1. Faculty members do not differ significantly on the frequency of using e-resources with respect to gender, faculty, designation, years of experience and academic productivity.
2. Level of computer literacy among the faculty members is low.
3. Faculty members encountered barriers when accessing e-resources.

Limitations of the Study

Limitations of the study are

1. The present study is confined only to the Kanyakumari District.
2. Respondents for the study are the faculty members of the colleges of Arts and Science only.
3. Present study is based on the sample of 120 faculty members who are working in Arts and Science Colleges in Kanyakumari District.

Methodology

The present study intends to examine the barriers encountered by the faculty members of Arts and Science Colleges in Kanyakumari District and to determine the level of computer literacy, purpose and problems faced by the faculty members when using e-resources and hence survey method is employed for data collection.

Population for the proposed study is all those faculties who are working in various disciplines in the designation such as Assistant Professor, Associate Professor and Professors in Arts and Science Colleges of Kanyakumari District. Among them 120 faculty members are selected using stratified random sampling techniques by giving due weight age to various categories as a sample for the study. Primary data will be collected from the respondents using a well-structured questionnaire constructed for the purpose. Questionnaire will be administered among the 120 teachers of various disciplines. Selection of samples will be done on the basis of stratified random sampling technique by giving due importance to various variables such as gender, faculty, designation, years of experience and academic productivity.

Analysis and Interpretation of Data

The data collected through questionnaire were analyzed by keeping the above-mentioned objectives. Collected data were analyzed using SPSS (Statistical Package for Social Science) with appropriate statistical techniques.

1. Locality and Age wise distribution of Respondents

Locality and age-wise distribution of respondents of the study are given in table 1.

Table 1: Locality and Age wise distribution of Samples

Variables		Age				Total
		Below 28 Years	28 - 38 Years	39 - 49 years	Above 49 Years	
Locale	Rural	23	0	28	17	68
	Urban	0	38	0	14	52
Total		23	38	28	31	120

Table 1 discloses that 68 out of 120 of the respondents of the study are of rural background and the remaining 52 belong to urban. Moreover, most of the respondents belong to the age group 28-38, followed by the faculty members of age above 49 years (31 out of 120), age group 39-49 years and the remaining are below 28 years.

2. Discipline wise Designation of Respondents

Discipline wise designations of respondents of the respondents are presented in table

Table 2: Discipline wise Designation of Respondents

Variables		Designation		Total
		Assistant Professor	Associate Professor	
Discipline	Arts	32	0	32(26.67%)
	Humanities	3	30	33(27.5%)
	Science	16	39	55(45.8%)
Total		51(42.5%)	69(57.5%)	120

Table 2 indicates that majority of the respondents of the study are belongs to Science discipline and it is followed by Humanities and Arts. In addition to that majority of the respondents of the study are Assistant Professor in designation.

3. *Level of Computer Literacy*

Computer literacy is the pre-requisite for accessing e-resources and it is one of the necessary skills among the faculty members to survive among the student community. Realizing this, the present study made an attempted to identify the level of computer literacy among the faculty members on a four point scales. Opinions of the respondents are summarized in table 3.

Table 3: Level of Computer Literacy

Literacy Level	Frequency	Percent
Below Average	12	10.0
Average	35	29.2
Above Average	35	29.2
Excellent	38	31.7
Total	120	100.0

It is clear from the table 3 that 90 per cent of the faculty members of are having computer literacy level are average and above. Moreover, 31.7 per cent of the respondents are excellent in computer handling.

4. *Level of Computer Literacy with respect to Discipline*

Level of computer literacy among the faculty members are further analysed with respect to discipline. Details of analysis are in table 4.

Table 4: Level of Computer Literacy with Discipline

Variables		Discipline			Total	Chi-square
		Arts	Humanities	Science		
Level of Computer Literacy	Below Average	12	0	0	12	100.89* at 6 degrees of freedom
	Average	13	20	2	35	
	Above Average	0	0	35	35	
	Excellent	7	13	18	38	
Total		32	33	55	120	

It is vivid from table that faculty members are differ in their computer literacy with respect to discipline, faculty members of Arts have below average computer literacy and faculty members of Science are having more computer literacy than Arts and Humanities. Moreover difference in computer literacy level is significant at 0.05 level with 6 degrees of freedom.

5. *Academic Productivity*

Academic productivity of the faculty reflects their dependence on primary sources, which are available more in electronic sources than the traditional sources. Academic productivity of the teachers of Arts and Science Colleges are presented in table 5.

Table 5: Academic Productivity

Academic Productivity	Frequency	Percent
Publications in Referred Journals	41	34.2
Publications in Journals	29	24.2
Publication of Books	1	.8
Publications of Chapters in a Book	8	6.7
Articles in a Seminar/Conference	41	34.2
Total	120	100.0

Table 5 shows that equal number of contributions among the faculty members in publications in referred journals and Articles in seminar/Conferences (34.2 per cent). However, contributions are only very few in Publications of books and chapters in a book.

6. *Frequency of Library Visit*: Frequencies of library visit by the faculty members for information access are summarized in table 6.

Table 6: Frequency of Library Visit

Frequency of Visit	Frequency	Percent
Daily	19	15.8
Two to Three times in a week	57	47.5
Weekly	35	29.2
Monthly	9	7.5
Total	120	100.0

Table indicates that more number of faculties visits the library more often and 47.5 per cent visit the library two to three times in a week.

7. *Frequency of using R-resources*: Similar to library visit, the frequency of using e-resources is further studied. Details of responses of the respondents are given in table 7.

Table 7: Frequency of Using E-resources

Frequency of Using E-resources	Frequency	Percent
Daily	26	21.7
Two to Three times in a week	58	48.3
Weekly	21	17.5
Monthly	15	12.5
Total	120	100.0

It is also clear from the table that the faculty members in using e-resources have reported the same trend. Hence the investigator comes to the conclusion that faculty members are visiting the library mainly for accessing e-resources.

8. *Purpose of using E-resources*

Purposes of using e-resources are varying from teaching to entertainment. E-resources are more useful for the researchers to update their findings. Purposes of using e-resources by the respondents of the study are presented in table 8.

Table 8: Purpose of Using E-resources

Purposes	Frequency	Percent
Teaching	37	30.8
Administrative Duties	16	13.3
Research	47	39.2
Contacts for scientific and educational tasks	6	5.0
Current Scientific Information	9	7.5
Locating Funding Agencies	2	1.7
Career Development	3	2.5
Total	120	100.0

Top most priority given by the faculty members for using e-resources are for Research (39.2 per cent) followed by teaching (30.8 per cent) and Administrative duties (13.3 per cent).

9. *Internet Facilities:*

Availability of internet facilities and facilities for accessing e-resources in the library promotes its uses too. Hence, the available facilities for internet are further studied. Details are given in table 9.

Table 9: Internet Facilities

Internet facilities	Frequency	Percent
yes	112	93.3
No	8	6.7
Total	120	100.0

Table indicates that 93.3 per cent of the respondents have internet facilities in their respective library. Hence there is opportunity to the faculty to access and use e-resources in the library.

10. *Problems faced when Accessing E-resources*

Problems faced by the respondents while accessing e-resources are further analyzed and details are in table 10.

Table 10: Problems faced when accessing e-resources.

Problems	Frequency	Percent
Low Speed Internet connectivity	14	11.7
Lack of Printing Facility	39	32.5
Lack of Assistance from the Staff	67	55.8
Total	120	100.0

Table reveals that lack of spot guidance is the major barriers while accessing e-resources (55.8 per cent), it is followed by printing facility (32.5 per cent) and low speed internet connectivity by 11.7 per cent. Hence, the investigator concludes that faculty members are expecting assistance from the library staff for accessing relevant information.

11. Barriers in Accessing E-resources.

Barriers encountered by the faculty members when accessing and using e-resources are assessed by asking them to rate their perceived experience on five point scale ranging from 'strongly disagree' to 'strongly agree' in eight items. Details of the problem along with mean score are provided in table 11.

Table 11: Barriers in Accessing E-resources

S. No	Barriers	Mean Score
1	I face problems in locating the most appropriate information sources	3.63
2	I have problems in accessing internet	2.86
3	I face problems with speed and the capacity of the computers	3.18
4	Too much time necessary to retrieve the needed information	4.18
5	Too much time necessary to explore the information resources	4.13
6	I face problems to retrieve records relevant to my information need	4.09
7	I retrieve records with high recall and low precision	4.11
8	Lack of knowledge of search techniques to retrieve information effectively	3.93
Total		30.14

With regard to barriers the mean score (30.14), which indicates that a high level of encountering problems when accessing and using electronic sources. It seems that major barrier is too much time necessary to retrieve the needed information and too much time to explore the information sources (mean 4.18 and 4.13 respectively) and the retrieval of records with high recall and low precision (4.11) followed by the lack of knowledge in search techniques(3.93).

Conclusion

The advantages of e-resources have drawn attention of the library users to a great extent. Accordingly these resources have occupied a significant place in the collection and budget of all most all libraries. Attitude of faculty members towards e-resources are positive and they used e-resources for their study as well as their research and the role of libraries as gateway to provide assistance in using these resources. The present

study revealed that faculty members are accessing e-sources through the library and they encountered some problems while accessing and using e-resources. Proper orientation and guidance along with computer literacy enable them to use the e-resources effectively for their academic pursuit.

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Mapping of Information Literacy in Dr. Babasaheb Ambedkar Marathwada University

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Abstract

The objective of the present paper is to highlight the concept of Literacy, Information Literacy, Computer Literacy, Internet Literacy, E-Information Literacy and to set the priorities for promotion of computer & internet information literacy. The study is performed related to computer & internet information literacy among PG & Research Scholar in Dr. Babasaheb Ambedkar Marathwada University, Aurangabad. The study /findings useful for researchers & also for university authorities for improve there services.

Keywords: Literacy, Information Literacy, Computer Literacy, Internet Literacy, Lifelong Learning, Library Instruction, E-Information Literacy.

INTRODUCTION

The process of identifying & selecting information has become complex. It is critical to promote information literacy [IL] in the digital age. Computers have become a necessary part of this digital society. The greatest challenge for society in the 21st century is to keep pace with the knowledge and technological expertise necessary for finding, applying and evaluating information.

The information society calls for all people to become information literate which means that they should not only be able to recognize when information is needed but also be able to identify, locate, evaluate and use effectively information needed for decision making or fulfilling different goals. IL is increasingly important in the present context of the information explosion and related uncertainties about its authenticity, validity, and reliability.

E-Literacy and Information Literacy are different but mutually compatible concepts with validity within specific contexts. Most librarians work within hybrid library environments, and may feel that e-Literacy is a single medium concept and as a practical tool for promoting the use of their mixed medium information service it is less useful than Information Literacy (Joint, 2005).

Internet Information Literacy is a major component of information literacy. It helps users cope with information from a variety of electronic formats & provides techniques & methods of collecting digital resources. It creates awareness of issues like copyright & intellectual property rights in an electronic environment.

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DEFINITIONAL ANALYSIS

Information: Information is data that has given shape. It may be considered as processed data. Thus, information is data plus the meaning, which has to be a result of human action (**Seetharama, 1999**).

Literacy: Literacy involves the ability to use language in its written form: a literate person is able to read, write and understand his or her native language and expresses a simple thought in writing (**Bawden, 2001**).

Information Literacy : Information Literacy is an understanding and set of abilities requiring individuals to recognize when information is needed, have the ability to locate, evaluate, use effectively the needed information and create information within cultural and social context (**ALA, 1989; CILIP, 2005; UNESCO, 2003; Karisiddappa and Kavita, 2005**).

E-Information Literacy: Electronic information literacy refers to literacy activities (such as reading, writing, and research) that are delivered, supported, accessed, or assessed through computers or other electronic means rather than paper (Martin & Rader, 2003).

Computer Literacy: Computer literacy is usually associated with technological know-how to manipulate computer hardware and software (**Humes, 1999**); ability to understand and use computers (Della, 1995; Adomi and Anie, 2006).

Internet Literacy: Internet literacy is the ability to properly use and evaluate internet resources, tools and services and applies it to their life long learning process; a set of skills to access the Internet; find, manage and edits internet information; join in communications and other wise engage with an online information and communication network (Glister, 1997).

BAMU : Marathwada University established in August 1958 was renamed in 1994 as Dr. Babasaheb Ambedkar Marathwada University (BAMU) is located at Aurangabad. The jurisdiction of BAMU is Aurangabad, Jalna, Beed & Osmanbad districts.

AIMS & OBJECTIVES

Present study has been undertaken with a view.

To study the extent of Information Literacy in PG & Research Students of the Science Departments in BAMU, with special emphasis on the E-Information Literacy.

HYPOTHESIS

Awareness of use of Internet is prominent amongst the PG & Research Students in Dr. Babasaheb Ambedkar Marathwada University, Aurangabad.

SCOPE & LIMITATION

The present study is limited to PG as well as Research students of Science faculty in Dr. Babasaheb Ambedkar Marathwada University, Aurangabad. The focus of this

study is to identify the needs & requirements of users in general & to know e-resources. While teachers of all faculties including science faculty, PG & Research students of other faculties have been excluded from the present study.

METHODOLOGY

Present study has used survey method. This method plays a significant role in research as can be seen from the statement. "The survey method is one of the most effective and sensitive instruments of research survey research can produce much needed knowledge" (Kasyap, 1969).

Data collection

The researcher has collected questionnaires of individual students.

Design of Questionnaire:

To know the needs of students covered, a structured questionnaire was designed and factual questions, opinion questions were asked.

ANALYSIS AND INTERPRETATION OF DATA

1. Use of Computer

The data collected was analyzed to know whether users are fluent in use of computer. The analyzed data is presented in figure 1.1

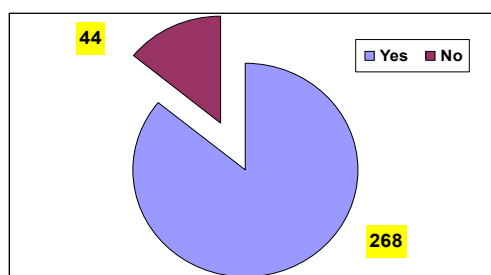


Fig No.16.1: Fluency of Using Computer

It can be revealed from figure 1.1 that majority i.e. 85.90% respondents are fluent in use of computer.

2.Frequency of Using Computer

It was felt to know how frequently users use computers. The data was collected and analyzed accordingly. The analyzed data is presented in figure 1.2

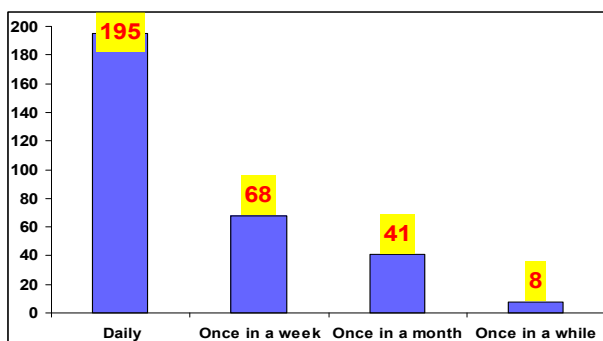


Fig No. 6.2 : Frequency of Using Computer

It can be observed from figure 1.2 that majority 62.50% respondents using computer daily, while 37.50% respondents were using computer rarely i.e. either weekly, once in a month or once in a while.

3. Frequency of using Internet

Attempts were made to know for what is the frequency of using Internet. The analyzed data is presented in figure 1.3

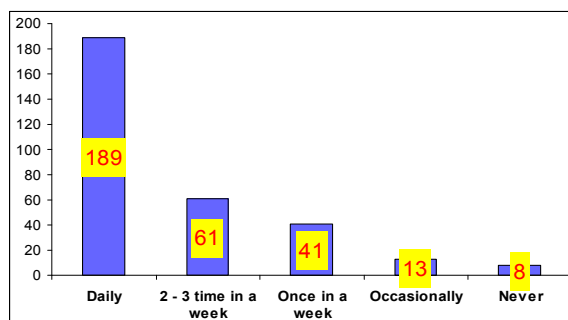


Fig No. 1.3 : Frequency of using Internet

It can be observed from figure 1.3 that majority 60.58% respondents using internet daily, while 39.42% respondents were using internet rarely i.e. either 2 - 3 time or once in week, occasionally.

4. Time Spend on Internet

The data collected was analyzed to know the how much time is spent by users spent on Internet. The analyzed data is presented in figure 1.4

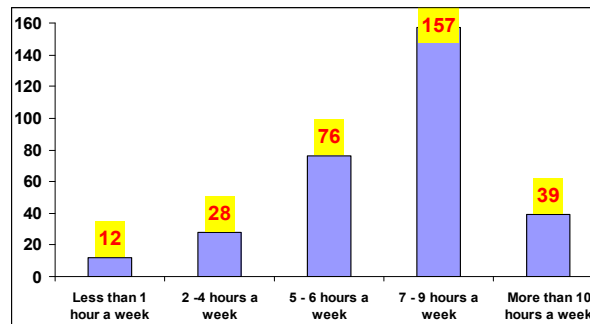


Fig No. 1.4 : Time Spend on Internet

It can be observed from figure 1.4 that majority 50.32% respondents spend 7 – 9 hours a week on Internet, while 49.68% respondents were spent less than 1 hour, 2 – 4 hours, 5 – 6 hours & more than 10 hours in a week respectively.

5. Place of Accessing Internet

The data was analyzed according to place of accessing internet. The analyzed data is presented in figure 1.5

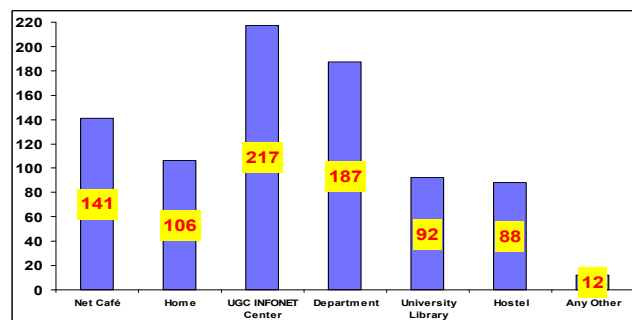


Fig No. 1.5 : Place of Accessing Internet

In this question users were allowed to select more than one option therefore the percentage is more than 100%. It can be revealed from figure 1.5 that 69.55% & 59.94% respondents accessing internet at UGC INFONET Center & Department respectively.

6. Experience of Internet Use

Attempts were made to co-relate the individual class by the experience of using e-journals. The analyzed data is presented in figure 1.6

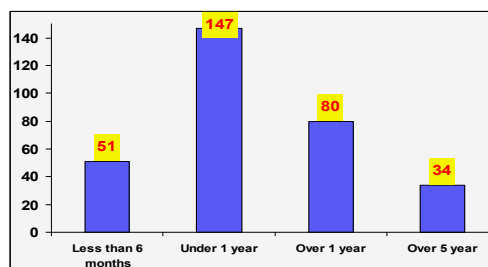


Fig No. 1.6 : Experience of Internet Use

It can be revealed from figure 1.6 that majority 47.12% students having under 1 year experience, while 23.72% students having over 1 year experience of using Internet.

7. Satisfaction Level

Responses received were analyzed to know the satisfaction level of the users. The analyzed data is presented in figure 1.7

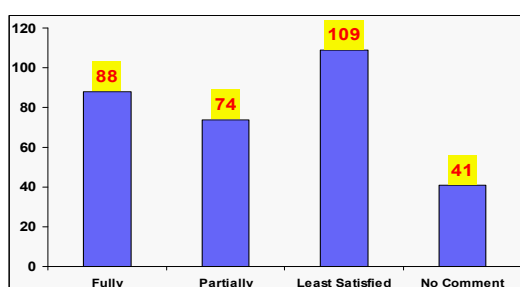


Fig No. 1.7: Satisfaction level of using Internet

It is observed from figure 1.7 that majority i.e. 34.94% students were least satisfied, while 28.21% students fully satisfied.

8. Internet Skills

It was interesting to know whether the users have skills to use Internet. The analyzed data is presented in figure 1.8

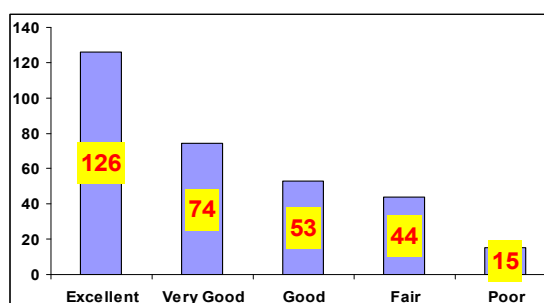


Fig 1.8 : Internet Skills of Users

It is observed from figure 1.8 that 40.38% & 23.72% students were having Excellent & Very Good Internet skills respectively.

9. Purpose of Browsing Internet

Researcher has made attempts to know the purpose of browsing Internet. The analyzed data is presented in figure 1.9

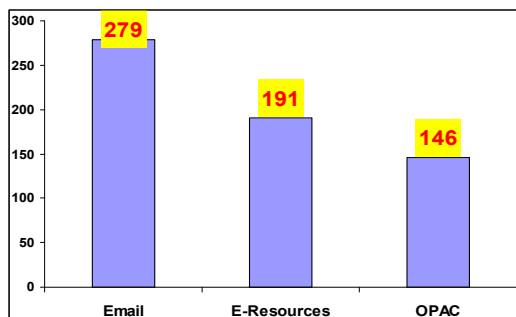


Fig No. 1.9 Purpose of Browsing Internet

In this question users were allowed to select more than one option therefore the percentage is more than 100%. It is observed from figure 1.9 that 89.42% & 61.22% students browsing internet for the purpose of E-mail & E-resources respectively.

10. Purpose of Using E-mail

It was interesting to know the purpose of using e-mail service. The analyzed data is presented in figure 1.10

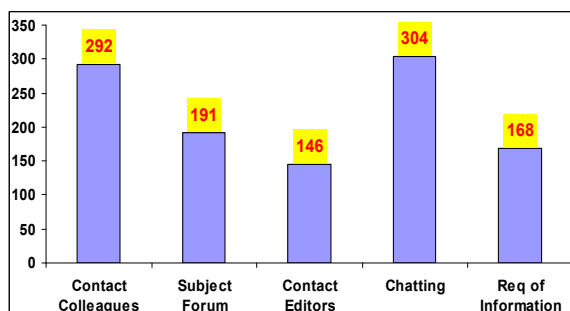


Figure No 1.10 Purpose of Using E-mail

In this question users were allowed to select more than one option therefore the percentage is more than 100%. It is observed from figure 1.10 that majority i.e. 97.44% & 93.59% respondents using e-mail service for chatting & contact colleagues.

11. Use of Search Engines

It was felt to know how frequently users use the search engines. The data was collected & analyzed. The analyzed data is presented in figure 11.1

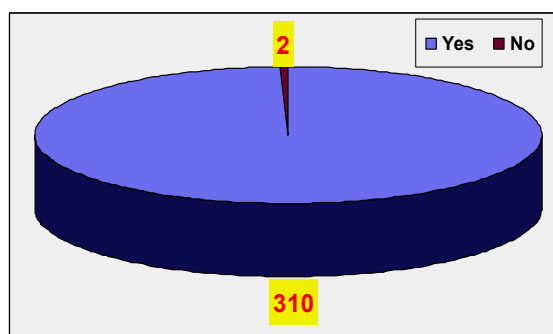


Fig No. 11.1 : Use of Search Engines

It is observed from figure 11.1 that majority i.e. 99.36% users are using search engines, except 0.64% i.e. each 1 user for Bio-chemistry & Chemical Technology those are not using search engines.

12. Searching for Articles

The data was analyzed according to various parameters for searching articles. The analyzed data is presented in figure 12.1

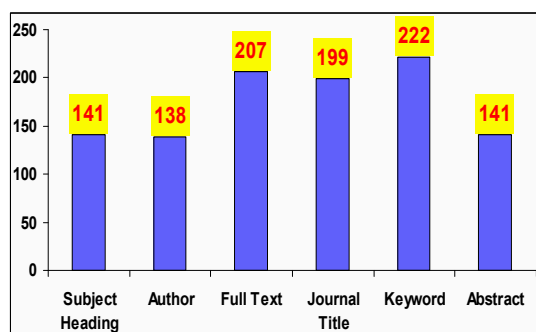


Fig No. 12.1 : Searching for articles

In this question users were allow to select multiple option therefore the percentage is more than 100%. It can be revealed from figure 12.1 that majority of the users search articles with the help of keyword i.e. 71.15, Remaining 66.34% & 63.78% users search articles by Author & Journal Title. While 45.19% & 44.23% of the users searching articles with the help of Subject heading, Abstracts and Author respectively.

13. Preferable Downloading Format

The researcher has made an attempt to find users which format they prefer for downloading. This information is analyzed & presented in figure 13.1

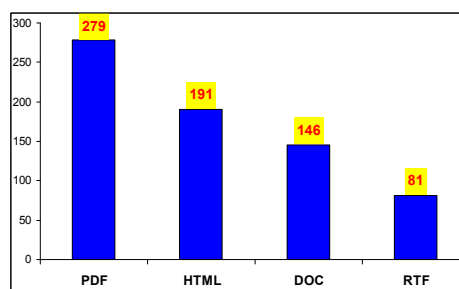


Fig No. 13.1 : Preferable Format for Downloading

In this question users were allow to select multiple option therefore the percentage is more than 100%. It can be resolved from figure 6.13 that majority 89.42% of the users' use PDF format for downloading document. 61.22% users use HTML format & 46.79% of users used DOC type. While RTF format is used by 25.96% of users.

FINDINGS

Some of the major findings are given below...

1. As regards for searching of articles 66.34% students searched the articles with the help of Full text, 71.15% students searching articles with the help of keyword. While 63.78%, 45.19% & 44.23% students searching articles with the help of Journal Title; Abstract; Subject Heading & Author respectively.
2. The data was analyzed by retrieval of information from e-resource using general & advanced search. General search are used by 74.35% students, while only 52.24% students are using advanced search.
3. It is surprising to note that inspite of the UGC-INFONET facility is available to the students. Only 50.32% students were using open source journals.
4. Attempt was made to analyze the locating information. It was found that 98.71% students locating information on Internet. While 83.01% students locating information in Library, remaining 6.08 students locate the information through Inter Library Loan [ILL].
5. Majority students i.e. 98.71% are locating information on Internet as well as 40.38% students' rate their Internet skills is excellent.
6. Out of 312 students 60.57% students using computer daily. While 21.79% and 15.38% students using computer once in a week & once in a month. Only 2.24% students using computer once in a while.
7. From the total 312 students of science faculty, 216 students i.e. 69.23% students need training for using e-database.
8. The data was analyzed by frequency of using internet. Out of 60.57% students using Internet daily. While 19.55% & 13.14% students using internet 2 - 3 time in a week and once in a week respectively. Remaining 4.16% & 2.56% students are occasionally or never using Internet.
9. As regards the accessing Internet in various places. Out of 69.55% students accessing Internet at UGC INFONET Center. While 59.93% & 45.19% students accessing Internet at Department & Net cafe. Remaining 33.97% & 28.20%

students are accessing Internet at Home & Hostel. It was noted that university library is not providing Internet facility.

IMPLICATIONS / SUGGESTIONS

For University Authorities

1. University library should provide Internet facility. It should also subscribe e-resources.
2. The library should start Bulletin Board Services to inform the research scholars about new additions of e-resources & consortium.
3. Introduce proper feedback systems to know about proper use of e-resources facility.
4. Staff should be trained, they should be aware of the functioning of both software & hardware, who can help the students in areas like accessing, downloading & printing of e-resources.

For Heads of the Department

1. The faculty should organize regular workshops to enhance usage of e-resources.
2. It should provide printing facility of e-resources free or at a minimum cost.
3. User training should be given for the proper exploitation of e-resources to give justice to UGC-INFONET programme.

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User Educations Programme in the Context of College Library

Bachhav Nitin B.*

Abstract

User Education programme has great importance to educate the student about library system, function and other aspect. This kind of programmes is designed to enable the users to make the most efficient use of their libraries. Students as well as the faculty members are unaware about the use of library resources. The growing use of ICT in the library has created a new learning environment and structure. The vast quantity of information available in a variety format makes it difficult to user to retrieve the correct information sources. Therefore, it became essential to library to organize user education programme through various media for the benefit of user community. The paper describes the need of the user education and method of its implemation for college library users.

Keywords: User Education Programme, College Library.

1. INTRODUCTION:

Libraries and Information centers have been the major source of information and their responsibility is providing information resources to its user is became more difficult in the light of information explosion & emerging of information and communication technology. College library support the teaching- learning needs of college objective they serve. It is the college libraries responsibility to ensure that the use of its information resources and services are maximized to benefit its users. Developments in computers, advanced in telecommunication system, audio -visual & multimedia technology have created new possibilities for the library & information centers to deals with the collection, processing, storage, retrieval and dissemination of information to its users. Keeping in view the huge amount of information available through digital / electronic form, it brings the challenges on the LIS professionals to catch up, manage the IT skills and knowledge for delivery of timely information to its user. The modern libraries and information centers are using different techniques and technologies for storage & dissemination of information. Therefore, to use of library resources & techiques, services is becoming more critical to the users. To help the users in this context the libraries have initiated User Education Programme to educate users for the optimum use of library resources and services.

2. DEFINITION:

User Education programmes main aim is to make all user aware about the information resources available in the library for the use of his/her study. Broadly defined user education programme is to teach user how to make the most effective use of library system. UNESCO General Information Programme define "User Education is to include any effort or programme which will guide and instruct existing and potential users in the recognition and formulation of their information

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needs in the effective and efficient use of information services and their assessment”

Misra & Phadke defined the User Education Programme in relation to academic library as ‘Educational potential library users, jointly by the library and academic staff in successive stages to help them to make the best use of the library resources and acquire sophisticated knowledge in its use’.

3. NEED FOR USER EDUCATION PROGRAMME:

The present society is an information dominated society. Every body is tried to acquire information on various topics. As per fifth law of the Library Science, there is exponential growth in the books & user. With the advent of internet and rapid developments of other information technologies, there has been continues growth of literature in all subject field. Hence now it is necessary for the LIS professionals to provide user education so that they could use the library tools effectively to locate their required information source. The need of User Education programme became arise due to the following factors:

- Information explosion.
- Exponential growth of information resources in all subject fields.
- Diversity of publications in various print & non-print formats.
- Emerging and growth of multidisciplinary course/subject.
- Application of Information Technology in Library & Information Centers.

4. COLLEGE LIBRARY:

College library are the library that are housed in a college. It is an integral part of education institutions. It caters the information need of the mostly undergraduate students & its faculty members. Its main function is to acquire & provide information sources necessary for teaching –learning process in the subject fields of interest to the college and to develop & maintain reading habits among the students. In order to fulfilled demands of user’s community, it acquires all the textbooks and other reading materials prescribed in the syllabus for the courses offered at the college. Beside it also subscribed few periodical / journal for the enrichment of knowledge of faculty members.

5. WHY USER EDUCATION PROGRAMME FOR COLLEGE LIBRARY:

- i. There is evidence that newly admitted students who came from school system where there is generally no well established school library, find difficulty in using the college library.
- ii. Often newly admitted student donot has idea about library catalogue entries, sequence of books arrangement in stack area, how to find the information from reference books such encyclopedia, dictionary, yearbook etc.
- iii. It is also observed that teachers themselves find difficulty in the systematic use of library & its services and fails to guide to the students how to make effective use of library resources.

- iv. Most of the users are not familiar with the use of different techniques, methods of storage & retrieval of information by the library & applications of IT in library operations.

Thus most of the students enter at the colleges without any background of library use. At this stage the role of the college librarian becomes much more important. It becomes the responsibility of college librarian to educate students towards the effective use of library resources and services. Librarian has a play significant role in the promotion of overall college education programme.

6. OBJECTIVE OF USER EDUCATION:

User Education programme is became much more important because it helps publicize library service & improve the image of the library among the user community. It helps the students in their pursuit of life long education. Their main objectives of the user education programme are:

- i. To promote the optimum use of library resources and provide better services.
- ii. To improve the student's skills in searching the document of his interest or subject.
- iii. To know the physical layout of the library , collection arrangement i.e. classification system and other services offered by the library
- iv. To help the user for effectively & efficiently use of library resources & services.
- v. To develop the ability of user to access needed information effectively & efficiently.
- vi. Enhanced image of the library and improved library services.

The ultimate objective of user education programme is to ensure that the maximum number of user know of the existence of libraries, about their location, there collection and how can retrieve the information resources from the collection of library.

8. LEVELS OF USER EDUCATION PROGRAMME

Depending upon the size of college library & there user's information need User Education Programme can be classified into three groups. These are as follows:

Library Orientation :

Library orientation is concerned with introducing the user to the library building, stack arrangement of library collection, rules & regulations of membership, method of issuing the books, fines for overdue etc. Library orientation programme basically comprise a) to familiarize user with the library collection , physical location of different units , staff and services provide by the library and b) To inform user about library books & other collection available in the library & where is locate & how to retrieval reading material from the system.

Bibliographic Instruction :

Bibliographic Instruction is meant to provide instruction to the user about the information resources available in the library of his area of subject. It helps users to take advantage of library resources to meet their information needs. Its main aim is to increase user's skills & ability to make effective use of library resources.

User Awareness :

Library orientation & Bibliographic instruction are the two components of user education. User awareness is an important component in the user education process. It provides the overview picture of the library. It includes information about stack arrangement, catalogue entries, reference books etc.

8. LIBRARY ACTIVITIES TOWARDS USER EDUCATION PROGRAMME:

The purpose of College Library is to give maximum service to the students and aware them for easy use of library resources. It has a number of activities to educate users about the optimum utilization of reading material through the User Education Programme. These are as follows:

- **College Prospect:** It contains details information about the admission process, other facilities available in the colleges. Under this prospect a separate chapter must be included regarding the library details i.e. books collection, reader services, book-bank facilities, list of library staff etc.
- **Library Guide/ Hand Books:** This is one of the popular methods for providing information to the user regarding the library activities. It contains information about physical layout of library, stack area, rules & regulation of the library, reading room facilities, reprographic service etc. It should be circulated among the student at that time of his/her admission to the first year course.
- **Lecture Method:** In this method, librarian should deliver a lecture to newly admitted student in the beginning of the first session of the college. Such lecture can be conducted in classroom & it should cover all aspects of the library collections and services. These lecture methods will create the reading habit among the student.
- **Book Exhibitions:** It is also the best method of the user education programme. Librarian & other staff should be arranging books exhibition in the various college programme. For ex. Books exhibition can be arranged at the time of college cultural programme. So that user can know which books are available in the library.
- **Library Visit:** Librarian should draw a specific plan for the user about the library visit. New admitted student should be considered first. At least three or four library hours should be assigned for all first year students for the library visit.
- **Library Publicity & Display:** This is another tool for the user education programme. Library publicity includes weekly/monthly book lists, list of new additions, bulletin boards, display racks, printed and handwritten poster, celebrating library weeks are some activities for attracting the user towards library.

- **Audio-Visual Aids** : In this method film, tapes, slides ,OHP can be used for user education programme. These methods greatly save the time of the Librarian because repetition of the lectures would be avoided. Main drawback of this method is there is no personal contact between Librarian & the readers/students.

9. CONCLUSION:

Librarian have play a key role in user education programmes as a teacher of both curricular & non-curricular activities by providing knowledge of and access to the world of information to the user. User Education Programme ensures maximum utilization of the information resources & optimization of information handling capabilities. Many college libraries introduce user education programmes to educate users about the library system i.e. collection, classification scheme, information resources & its search techniques and new technology such as web OPAC, e-resources etc. Moreover, NACC published the books entitled "Guidelines on Quality Indicators in Library and information Services: Affiliated College" also stated the importance of User Education Programme under the Best practices for College Libraries. Therefore it is a need of the hour that every college whether it is a small or big should try to implement the user education programme for the satisfaction of the students as well as faculty members.

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LIC's of Islamic World: face of 21st Century

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Abstract

The paper will discuss about causes and benefits of developing library science in the Muslim world. Paper will also give some important points for developing library and Information Centres [LIC's] of the Islamic, which will drive us to the reviving process of our golden age of science and knowledge. If we ignore library science, definitely, our research and innovation sector will be speed less and our existence will be meaningless.

Key words: Library, Muslim world, challenges, Recommendations.

Introduction

The term Muslim world (also known as Ummah) has several meanings. In a religious sense, it refers to those who adhere to the teachings of Islam, referred to as Muslims. Muslim, have great contribution in library management and information science which is deep-seated. Indubitably, it can be said that modern library movement was started by Muslim in middle age. At that time when Queen Isabela's library contained only 201 books, at the same time Cordova library contained about one million books. At that time the biggest Library and Information Resource center owned by Muslim (Kader: 1936). Rightly it can be note that Muslims are pioneer of modern library and information movement. In this paper we will discuss comparative contribution, present status, problems and challenges of libraries of the Islamic world and the process of reviving past invincible golden age of knowledge and science. Currently there are 58 Muslim countries in the world and the one-third population of the world is follower of Islam. Jews have only one crore brains. They control the power of whole world by cultivating these brains. So we can compete with rest of the world in this process. We have to focus on Muslim country and Muslim population. Quest for knowledge and call for education has always been given utmost emphasis by the earliest Muslims as seeking for knowledge is a religious obligation. The position of Qur'an and Hadith as source of knowledge brought about the impetus to the birth of a collection, ascribed to the necessity of preserving the Qur'an and the Hadith. During the earliest days of Islam, mosques were the nerve centres of the society and also used as the locus of teaching. Islamic libraries that we used to know emerged from the tradition of 'mosque as library' in the Islamic civilization.

Major necessity of developing library sector of Muslim world

- "Library movement" can be a peaceful Muslim movement that can speed up Muslim Renaissance.

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- We want to start a new social movement “knowledge movement” by strengthening library sector of Muslim world.
- Effective research and innovation is impossible without strengthening library sector. We can decrease time consumption of research by innovating digitizing modernizing the library sector. We can increase speed of research & innovation by giving modern service.
- We want to revive the age of knowledge and science again to the Muslim world.
- Library movement can be elixir for Muslim Ummah.
- We want to create a new Muslim world that will be effective, well informed and knowledge based society. It is possible by modernizing of library and information sector.
- Reading habits of Muslim world hundred times lower than rest of the world. It can be increased by decorating outer and inner form of library and information center of the Muslim world.
- Muslim has “one third brain” of the world. We want to cultivate, improve, and flourish each brain of Muslim ummah.
- Developed library sector means developed knowledge and scientific innovation. Without developing this sector it is impossible to revive the golden age of Muslim.
- First Quranic verse is “**Read by the name of Allah who has created you.**” Islam emphasize on knowledge acquiring from birth to death.

Comparative situation of present and past of libraries of the western and Muslim world.

Extraction from Muslim History

Past (Middle era):

- Muslims were founder of modern library and library movement.
- They were basically inventor of modern public and academic library system.
- They invested core wealth for development of this area.
- Founder of modern science.
- Owned world biggest library. (Cordova library)
- Library was well decorated and resourceful place of the society.
- There were resourceful public libraries in all provinces.
- Within the world top five hundred libraries based on collection and service pattern there is no library owned by Muslim.
- Policy makers are unwilling to invest for this sector.
- Library is the worst and bad place of the society so that people do not feel attraction for going to library.
- Maximum libraries are not automated and digitised.
- No remarkable public library.

Extraction from history of western civilization (Middle era):

- They completely ignored this sector.
- There was no remarkable library in the west.

- When Cordova library owned about 1 million books then Queen Isabela's library had only 201 books and Royal France Library contained only 900 books.
- They were unwilling to invest for the development of this sector.

At present (21st Century):

- They owned biggest library of the world (Library of congress).
- They have seven thousand enrich libraries.
- Have world class information science institution.
- Library and information center are best decorated and resourceful place of the society.
- Transformed the libraries into "entertainment and knowledge center for all citizens.
- Donate big budget for development of library and library science.
- Transmute it profitable as social business.
- Maximum libraries are automated and digital.
- Millions of library rendered effective and innovative service.
- Highly decorated public, special and academic library.
- They arranged hundreds of conference on library science.
- They developed thousands of well equipped public academic and special libraries.

Major problems for not developing library sector of Muslim world

Lack of proper realization : Islam seriously emphasizes on knowledge gathering and dissemination. The first sentence of Islam is "**Read**". Prophet (Saw) said "One hour acquiring knowledge in night is equal to spending the whole night for Allah's another work." Prophet (Saw) also said "It is mandatory for every Muslim to acquire knowledge. But in modern time ruler of Muslim countries brutally ignored this realization.

Want of investment : Library sector is a non-profit sector and Muslim countries are mostly under developed and developing country. The government of Muslim countries are unwilling to invest in such a non-profit sector also the reality is maximum Muslim countries are very poor and they are struggling for their food and fundamental necessity of the citizen. Lack of world-class library science institution or department throughout the Muslim world. There are 58 Muslim countries in the world but no mentionable world class library science department in universities. Throughout the Muslim world there is no skilled and effective research on library science.

Lack of IT application in library & information center : Computer and information communication technology (ICT) have great impact on libraries and information centers at the present time. In the developed world they use every ICT material in their library and information center. They cope up themselves with ICT

innovation. At the same time Islamic world have to plan about digitization process in their library.

Scarcity of accurate planning : Appropriate, exhaustive, well-timed planning and implementation can give actual speed to a particular issue. Muslim world have no effective, creative plan for developing library sector.

Lack of skilled professionals: A visionary person can drive a nation towards achieving an ultimate goal. For developing this sector there is enough shortage of visionary and skilled personality for actual development of library and library science of the Muslim world.

Absence of Adequate classification scheme : In the modern world there are several classification schemes i.e. DDC, UDC, LC, CC, BC, etc. every scheme is slanted to particular country continent, region or religion. But there is no existence of scheme for Islamic countries invented by Muslim for this reason arranging Islamic resources.

Dearth of library organization and lack of research : There are hundreds of library organizations in the world but there is no library organization for Muslim countries which will play vital role. In the western world i.e. USA, UK etc. gave hundreds of scholarships for students of library science but Muslim world brutally ignore it. In the western world every year hundreds of conferences arranged for the professional and student of this field.

Subject heading : The widely used subject heading i.e. LC and sears list but no effective subject heading for arranging Islamic resources.

Core Challenges

Information explosion: Information explosion is a term that describes, and analyzes the rapidly increasing amount of published information and the effect of this abundance of data. As the amount of available data grows, the problem of managing the information becomes more difficult which can lead to information overload. It requires skilled qualified personality. Otherwise research and innovation will be speed less.

Expansion of information and communication technology: Information and communication technology (ICT) is expanded everyday. Coping with this technology is a great challenge for librarian and information scientist. Without ICT knowledge managing digital information is not possible. So modern library science education is vital challenge for Islamic world.

Emergence of library science as a Multidisciplinary subject: Library science emerged as the most modern subject in western world. The course titles are-

- a) Informatics. b) Information science. c) Knowledge management. d) Chemi-informatics. e) Bio-informatics. f) Health informatics etc.

But Muslim world backdated course curriculum rendered in some countries and there are some countries till now unaware about this sector's revolution.

Emergence of Digital library and library Business: Now-a-days digital library contributes as the main media of information. Effective, modern digital library provides some innovative service. For this reason digital library emerged as the social business center of information. Western world specially U.K, USA, Australia by British council, American center made a new business throughout the Muslim world. They made their information center profitable organization.

Innovation of public library as an entertainment center: At present public library work as “knowledge & entertainment center”. In America they made slogan “why not library as a third place” Means after home, and job office library is third time consumption place. Their library’s ins and outs are very attractive charming and libraries are resourceful. For this reason people rushed the library.

Information networking and resource sharing: Information networking and resource sharing is a burning issue in this age of information explosion because single library has no sufficient budget for buying all necessary resources. In western world thousands of libraries network exist.

Digital and virtual library: Currently digital and virtual library emerged as the most necessary for user, researcher and scientist. Managing digital and virtual library is important for an information scientist. Especially for Muslim world which 90% libraries are not digitized?

Special library as an innovation and research center: In 21st century special libraries transformed into the “innovation and research center” throughout the world. Sixty percent success of research depend on quick and innovative service rendered by library and information center.

Improvement of E-society and E-library : Thousands of E-libraries emerged in modern time i.e. Emerald, Amazon.com etc. It is a great challenge for Muslim world to cope with this invention. E-society is one that uses digital media in most relationship. Our aims should make our brother hood cemented by using this technology.

Classification scheme: There is no effective classification scheme by which Islamic information resources will arranged effectively. This is the high time to think about a classification scheme and subject heading invention for the Muslim world by managing uniformity with others so that international information networking and resource shaming will be easier.

Library software package: There are hundreds of library software packages in the world i.e. GLAS, LIBSYS, Alice, DRA, KOHA etc. but no software work effectively for arranging Islamic resource and other resources combine. A library software package invention is necessary for Islamic world.

Solution and Recommendation:

After describing and inventing actual situation of libraries and library science of the Islamic world, we want to mention some necessary recommend for long time and short time remedy.

1. Establish world class branded library world wide like British Council, American Center, Russian Cultural Center etc. I am proposing the name **"Global Amity Center"**.
2. Urgently establish a **library commission** under OIC for Modernizing library sector of the Islamic world.
3. WCOMLIS Responsibility:
 - a) It should be global, active, invincible library organization for the Muslim Ummah.
 - b) It should a permanent secretariat and proper plan for raising fund.
 - c) It should arrange conference every year.
 - d) Co-operate with OIC, IDB, RABETA etc. of Islamic international organization for developing library and library science of Muslim world.
4. Making a visionary plan by OIC initiated by WCOMLIS that may be "vision-2050" vision may include.
 - a) Establishing "Global harmony Center" in minimum 100 countries of the world.
 - b) Book for every Muslim and library for every Muslim.
 - c) Knowledge based Muslim world.
 - d) 70% library digitization.
 - e) Establishing world-class public library for each Muslim country and Non Muslim country where Muslim citizen live.
 - f) Effective Muslim information network and resource shoring program formation
 - g) Founding some special library for researcher.
 - h) A mosque and A automated library project: This project will insist on following issues.
 1. Every Mosque should have automated and resourceful library means where mosque exist, library also exist as the integral part.
 2. Every Mosque Imam will be responsible for increasing reading habits of his 'Musalli'.
 3. This library's collection include all necessary, national, international scientific and other books as well as information resources.
 - i) Invention of subject heading, unique clarification scheme and software package for Islamic world.
 - j) A resourceful Muslim world means every educated Muslim have minimum 2000 books.
 - k) Establishing some world class scientific laboratory. Realize "vision creates hope".

5. Establishing world-class library science institution for Muslim world initiated by OIC.
6. Muslim organization i.e. OIC, IDB, RABETA, WAMY should give enough scholarship for the student and professional of library science. Realize that without developing library sector developing knowledge and science is impossible.
7. Taking public, special, academic library project: Muslim organization should take proper, timely initiative for starting a project for following aims:
 - a) Establishing modern, effective public, special and academic library and information center throughout the Muslim countries and non-Muslim countries where Muslim citizen live.
 - b) Project should also be insist on establishing library in the least develop country i.e. African LDC countries.
 - c) Awareness program for increasing reading habits of Muslim people.
8. Digitization and automation project: This project include following tasks.
 - a) Administer research about the actual situation of established libraries of Muslim world.
 - b) Step by step digitization of settled libraries of the Muslim countries.
9. Taking and implementing awareness program by Muslim organization which may include:
 - a) Fund raising.
 - b) Every educated Muslim should have collection of 2000 books.
 - c) Every Muslim community should have automated, resourceful library.
 - d) Every Mosque's integral part is a library.
 - e) Every Muslim should have minimum knowledge of science.
 - f) Creating library based intellectual and readers group.
10. Develop concept "Esteem librarian and Library" throughout the Muslim world.
12. Develop E-society throughout the Muslim world.
13. Upgrading library science as a multidisciplinary and modern subject throughout the Islamic world.
14. Invest core wealth for developing library and library science of the Muslim world.

Conclusion

Islamic libraries are not just history but a study area which need constant application so that Islamic libraries are held in high regard. The Muslim social scientists or librarians may at best summarize the state-of-the-art and draw the outline of Islamic librarianship.

Muslim organization & LIC's can play a vital role for spreading knowledge all over the world. It can be torchbearer, hope center, inspiration arouser, and thought provoker towards peace, Muslim awakening and Islamic renaissance. WCOLIS can be lighthouse for the world peace and knowledge movement. Our slogan should be "knowledge is peace, light" and knowledge can effectively disseminate by library and information centers.

We should give proper attention, take timely decision towards this field and should invest core wealth for developing, library and information center of the Muslim and rest of the under developed world.

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DEVELOPING E-RESOURCES IN ACADEMIC LIBRARIES

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Abstract

Every Library in present day is going to include certain forms of Electronics Information resources especially for researchers since research need Nascent information to keep abreast of latest Development in concerned areas of interest, The Article based information resources are no More sufficient to Meet Their Need. Hence, the question of Electronic Information resources, Is important the Article discusses the emerging role of different forms of Electronic information resources That Modern Libraries are striving to acquire primarily for research.

Keyword-E-Book, E-Journal, E-resources, Internet E-Document

Introduction

Academic Libraries, like all types of libraries, are in transition as they move from books on shelves to bytes on computers. Academic libraries, limited by space and staff to cover their hours of operation, have created 24-hour, digital information commons. The librarian focus on the millennial undergraduate features a virtual library that highlights extensive software suites and modules with computers where students can work collaboratively 24 hours a day, an expanded center for writing instruction, and a center for computer training, technical assistance, and repair. To transition to this type of library can be a challenge for a profession not noted for the embrace of dynamic change initiatives and paradigms. Looks at how digital resources impact and challenge traditional library workflows, and focuses on new ways these workflows can be altered to accommodate the new electronic information format in the academic library that has rapidly become the norm.

Although the majority of users interviewed expressed a willingness to use e-resources in the future, it was clear that many feel that currently the usability of e-resources is too poor to offer a genuine alternative to printed resources for serious academic study. The quality of the content is also huge issue, and the ability of users to assess the quality influences use, particularly within the academic community. To have e-resources (if produced as original documents, as opposed to electronic versions of previously-produced paper documents) reviewed by reputable academics, academic and library journals, publishers and booksellers, just like printed books, will ensure increased user confidence in the quality of the material.

Now, there is no suggestion that the emergent resource of e-resources will replace existing information resources, rather than just supplement them. New technological developments do have to be made in order to give e-resource a more centre stage role. However, the crucial issue is that, if e-resource is to reach their full potential, they will have to offer more than simply an electronic version of the printed book. Librarians

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need to promote e-resource and educate users, as well as staff, about their benefits and use. Users require a shift in attitude away from the current perception that everything must be on the printed page, towards the varied possibilities offered by e-resource. Publishers, other vendors and librarians need to work together on more mutually congenial business models.

E-Resources in Academic Libraries:-

E-Documents: Types

We can no longer regard a document in simple terms as a static, single physical entity (which at one time would have been a book or a journal article). Information cannot necessarily be considered as a complete, finished piece of work that can easily be catalogued, classified and consigned to a collection. Information held in electronic form can be several things at once, a multimedia fusion not just of sound, text and image but animation, video clips, software applications and real time discussion.

Barker had identified three. Types of document for use in A digital resource: static, Dynamic and living.

Static documents- are the most basic they contain fixed information and never change their form (such as 'traditional' online data).

Dynamic documents- also contain fixed information but are able to change their outward form, the way embedded material is presented to users (such as multimedia CD-ROMs)

Living documents- are able to change both their form (outward appearance) *and* their embedded information (such as information contained on Web).

E-Books

An e-Book is based on both emulating the basic characteristics of Traditional Books in an Electronic format as well as leveraging internet Technology to make an e-Book easy and efficient to use.

An e-Book can take the form of a single monograph or/a multi- volume set of books in a digital format that allow for viewing on various types of monitors, devices, and personal computer. It should allow searching for specific information across a collection of books and within a book. An e-book should utilize the benefits of the internet by providing the ability to embed multimedia data, to link to other electronic resources and to cross-reference information across multiple resources.

E- Journals

Electronic publishing has led to a new era of communications and information sharing. Electronic journals have helped publishers and scholars to disseminate information much more quickly than was previously possible. Initially, electronic journals were seen by many as a passing fad. Many in the library profession considered them problematic and inappropriate for library collections since they

presented problems In terms of acquisitions, subscriptions, cataloguing, and archiving.

Automating journals was a logical progression of the trend in libraries to automate routine practice such as cataloguing and circulation. The emergence of electronic journals followed the widespread adoption and use of electronic mail, list serves and discussion groups to disseminate information quickly to large audiences. Franks (1993a) offers several reasons why electronic publishing was adopted by scholarly research Journals long before it was used far other kinds of publications:-

- The intended audience uses the Internet more than. The general population and is familiar with using documents in an electronic form;
- Libraries are experiencing extreme financial hardship and cutbacks in funding;
- There is a strong move for scholars to find less costly ways to promote their work.

E- Journals Available Through Internet

Described as the 'classic electronic journal', this is the format with which most of us are familiar, and is how the majority of users define an electronic journal. LIBRES: Library and information Science Research Electronic Journal, McJournal: The Journal of Academic Media Librarianship. PACS Review and the Oliver tree: A Library and Information Sconces Electronic Journal exemplify this type of electronic Journal. The first three titles originally were distributed via e-mail, but are now available on the web. For this reason, only announcements of new issues are distributed by e-mail or to list servers. In contrast. The Olive Tree was available exclusively on the Web. A first for an electronic journal, but it has now ceased publication. LIBRES, McJournal and the PACS Review are first generation electronic journals, which have evolved into second generation electronic journals. Subscriptions and access to this category of electronic Journal are free.

E-Zine (E- Magazine)

E-zine means electronic magazine/periodicals and it is called web-zine. The Articles that are stored on a file server may be distributed or accessed via a computer Network. Some sources of e-zine are: www.webzine.htm, www.brint.com, www.musicindia.com, www.indiatoday.com, www.bestindiansite.com, www.news.site.com, etc

E- Thesis and Dissertation (ETD)

Now days, thesis is presented in an electronic medium which is called an ethesis Or e-dissertation. An ETD is an electronic document that explains the intellectual Works or research of a researcher. It is expressed in a form simultaneously suitable for Machine archives and worldwide retrieval as well as similar to its paper predecessor. ETD is different; however, it provides a technologically advanced medium by any word Processor for expressing ideas with less expensive, small space, easy handling, high Longevity and never collect dust. At user's choice, they can be available to any one that can browse the following World Wide Web. www.unesco.org/webworld.etc/contribution.html, <http://scholar.lib.vt.edu/theses>, <http://www.exim-India.com>, www.geocities.com, www.moe.edu.sg.etc.

E- Newspapers

Like ETD, an electronic newspaper is a self contained, reusable, and refreshable Version of a traditional newspaper that acquires and holds all information in the Newspaper electronically. (The electronic newspaper should not be confused with Newspapers that offer an online version at a web site). The near-future technology researchers expect to have the product available as soon as 2003 will use e-paper (i.e. electronic paper) as the major component. Information to be displayed will be downloaded through a Wireless Internet Connection. A number of versions of the future technology are in development, although there are two frontrunners: Xerox's Palo Alto Research Centre (PARC) is working on a newspaper that would consist of a single sheet of their e-paper (called Gyricon), while Lucent, in partnership with a Company called E-Ink, is working hard and sole on a multi-page device/ scheme (called E-Ink).

Internet and World Wide Web

In special information units (the traditional online databases and familiar CD-ROM products have been joined by the Internet and World Wide Web (WWW), electronic journals, groupware, e-mail and Intranets, Technology Is advancing at a phenomenal pace and information managers face a relentless deluge of new electronic products and services on the market.

In developing facilities geared towards improving end-user access, the goal is therefore to 'minimize the skill but maximize the power.' An example of the technology used to achieve this is the 259.50 protocol which allows searching on a variety of different databases (with different structures) Using the same set of commands. The World Wide Web currently represents the single most important common interface from which to access a diverse and desperate range of information.

Intranet

The value of an Intranet is that it can Integrate In one central source a combination of internal external, formal and Informal information. This is an important consideration in the corporate sector where Informal Information source are rated so highly. Positive communication flows are encouraged and interaction between colleagues and project teams is seen as a valuable way of creating a shared! Knowledge base for the organization. There is a suggestion however that because intranets are a 'productive layer in knowledge economy engineered organizations' they are less likely to be successful in strictly hierarchical organizational structure.

Database Access

The Internet facilitates the building of specialized databases by a particular institution, or consortium, and the making of these widely accessible for use by other organizations. For example, the Museum Educational Site Licensing Project, initiated by the J. Paul Getty Trust, is making art Images and information from six museums

(including the National Gallery of Art) available to seven universities. The databases thus created combine text and digital images and are designed for use in teaching in art and related disciplines. Academic Libraries are participating in the project as test sites, performing research on access modes and evaluating use.

Electronic Publishing

What happens to the library in the future will depend to a very large extent on developments in related sectors, most obviously the publishing industry. One must assume that the proportion of the world's publications issued in some electronic form will increase and, thus, the proportion issued as print on paper will decline. Less clear is the form that the electronic publishing will take. How much will consist of resources that can be accessed only through networks and how much will actually be distributed, for purchase or lease, as CD-ROM, videotape, video-tape. Electronic book or formats yet to be devised?

Features of some ER systems

Supporting acquisition and management of licensed e-resources

May be integrated into other library system modules or may be a standalone system

May have a public interface, either separate or integrated into the OPAC

Providing descriptions of resources at the package (database) level and relate package contents (e.g. e-journals) to the package record

Encoding and perhaps publicly displaying licensed rights such as e-reserves, course packs, and interlibrary loan

Tracking electronic resources from point of order through licensing and final access

Providing information about the data providers, consortia arrangements, access platform

Providing contact information for all content providers

Logging problems with resources and providers

Providing customizable e-mail alerting systems (e.g. notices to managers when actions are expected or required)

Linking license documents to resource records

Supports retrieval of SUSHI usage statistics.

Advantages of e-resources

The biggest advantage is the so-called everywhere-ness of e-resources. A researcher in Antarctica or anywhere on Earth or in space and who has an internet connection via a satellite link or landline can access the contents of a digitized text for consultation. In a similar fashion, a student away from any research library can access that library's holdings via a computer attached to a modem.

A large state or nation can reduce their reliance on multiple copies of a book and instead make available the text as an e-resource.

In areas where preservation problems are common and/or climate-controlled conditions are difficult for a library, the e-resource is generally not susceptible to damage in the same way as general resources. May be of course, the server where

the e-resources resides and the connecting Net work is subject to interruptions in services for many reasons.

The e-resources can be made available on a CD-ROM and occupy a fraction of the space of a paper volume of the same Title.

The e-resources either in its online or CD-ROM form many contain animations and line-action illustrations not possible in p-resources.

E-resources opportunities-

The internet has caused an evolution in the resources, book publishing Industry with the emergence of the e-resources. The advantages of e-resources for Libraries are straight forward and include.

1. Easy access to content.
2. on-demand availability
3. Prevention from being Lost, stolen, or damaged.
4. Capability to search within a book across a collection of general resources.
5. Ability to be linked to other resources.
6. Absence of physical space requirements.
7. Device independence for accessing the content.
8. Access to content using standard web browsers.
9. Customizable search interfaces.
10. Easy transportation, and
11. Access from anywhere.

E-resources challenges

a) For Librarian-

The integration of Books in to digital Libraries has not only created opportunities for Librarians, but also created several challenges. Full-text access and retrieval of e-resources combine Library based theories and principles with web search and retrieval techniques. Librarians must develop innovative policies, procedure, and technologies to accommodate the publication of and access to e-resources. E-resources challenges for Librarians can be grouped in three categories-

- a- acquisition and collection development
- b- standard's and Technology ,and
- c- Access.

Within each of these categories are subcategories.

- a) Acquisition and collection development challenges include-budget allocation, usage and distribution models, purchase models, and collection development strategies.
- b) Standards and technology challenges include- not only cataloging and Meta data standards and schemes. But also e-resources hardware and software technologies, digital rights Management software, and user and staff training.

- c) Access challenges include the cataloguing and Indexing of e-resources, circulation models for the electronic environment, and preservation and Archiving of e-resources linked to them.

Impact of Electronic Technologies on Libraries.

It is obvious that electronic technologies have already had considerable impact. Virtually all libraries, at least in the most-developed countries, are now members of networks that greatly facilitate the location of sources of information and the gaining of access to them. Card catalogues have largely been replaced by online catalogues and these are being expanded through the addition of materials not previously included. The whole idea of what a catalogue should be is changing; it is no longer seen as a tool bounded by the collections of a single library but one that reveals the availability of resources in a network of libraries or even one that is essentially a gateway to a universe of information resources in printed, electronic or other forms. Use of terminals or work stations to access databases of various kinds is now routine for many libraries, and most now add electronic resources to their collections in CD-ROM or other forms. These developments have occurred with surprising speed, suggesting that the changes of the next decade will be more dramatic and rapid than those of the past decade.

It is startling to realize that in 1983, as I recently read, no library owned a CD-ROM... When one thinks of the widespread use of them today, one wonders about the future proliferation of other forms of digitized information: intelligent work stations, optical scanners and optical discs, expert systems, artificial intelligence, hypertext, broadband and satellites, and local area networks [LANs] and other kinds of networks, as well as devices yet unknown.

That this electronic revolution in libraries has occurred, of course, is due to developments over which the library profession has had little direct control, most obviously the growth of electronic publishing and of networks that facilitate scholarly communication.

Role of the Library

An obvious challenge is the problem of how to integrate electronic resources with more traditional forms. The need for complete integration seems taken for granted by both library users alike, at least in the scholarly as Dougherty and Hughes (1991) report: "Provosts and librarians... prefer a future in which there is universal access by faculty and students to multiple information sources in all possible media via a single multifunctional workstation,"

Conclusion

Electronic resources are becoming increasingly important to libraries of all types and sizes. Addresses the development of an electronic information resources collection development policy to guide the librarians at Penn State Harrisburg in the selection of electronic reference resources. Instead of focusing on how well a given item fits into

or supports the collection, the policy gives general guidance on the selection of electronic resources. The general collection development guidelines for electronic information resources include relevance and potential use of the information, redundancy of the information contained in the product, demand for the information, ease of use of the product, availability of the information to multiple users, stability of the coverage of the resource, longevity of the information, cost of the product, predictability of pricing, equipment needed to provide access to the information, technical support, and availability of the physical space needed to house and store the information or equipment.

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Selective online Web Resources on Business and Management Sciences

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ABSTRACT

The Internet is one of the most important and complex innovations in human history, the largest and most complete tool for information exchange ever made available to the global population. The URLs of selected web resources mentioned in this paper will help in location in business & management related information for management professionals. This paper makes an effort to identify & list the imperative web resources on business & management sciences, which are helpful in learning, teaching and research activities of management institutions.

1.0 INTRODUCTION

For hundreds of years printed information sources have been used-either by purchasing them or by using them through libraries. The situation began to alter about four decades ago with the introduction of computers in information handling and there has been a dramatic change over the past few years. Recent developments in information and communication technologies, especially the Internet and the web, have transformed the way information is generated, disseminated, preserved, archived and made accessible. The Internet is one of the most important and complex innovations in human history, the largest and most complete tool for information exchange ever made available to the global population. Since the quasi-miraculous emergence of the WEB in 1990s. Web sites¹ “a set of web pages with a particular focus” have been developed by all forms of Internet users – commercial (.com), organizations (.org), government (.gov), and education (.edu). Information has been a continuous increase in the volume of scholarly resources in electronic form, such as e-books, e-journals, e-databases, e-theses and dissertations, e-prints of research papers, and the like.

2.0 OBJECTIVE

The key objectives of the present study are –

1. To provide imperative web resources available on business and management sciences, which are useful for students, research scholars, teachers and business professionals?
2. To identify and list the bibliographical & full text databases, online journals, open access journals, online directories & dictionaries and subject search engines & information gateways and digital libraries.

3.0 METHODOLOGY

The methodology used in this study is review of literature to know the various web resources available on business & management sciences. Review of databases helped

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to identify & list the imperative web resources which may be beneficial for management students, faculty and business professionals. Students, research scholars and faculty members of faculty of Management studies, Banaras Hindu University, Varanasi as well as review of available databases on internet helped in selecting the web resources on business & management sciences.

4.0 WHAT IS WEB RESOURCE?

Web resource is also known as Uniform Resource Locator (URL) that describes the protocols needed to access a particular resource or site on the Web, and then point to the resource's Internet location.

Normally the web resource or URL is composed of six components ²:

1. The protocol or data source (i.e.ftp://gopher://news://telnet://WAIS://http://)
2. The domain name (for the Web server where the desired information resides)
3. The port address
4. The directory path (location of the Web page in the Web server's file system)
5. The object name or (xxx.html)
6. The spot (precise location within the file)

5.0 SELECTIVE WEB RESOURCES

Following are some of the imperative reference/ information services, bibliographical and full-text databases, online database, open access journals, digital library, subject search engines and information gateways, business and management directories & dictionaries for business managers.

5.1 ONLINE REFERENCE/ INFORMATION SERVICES

5.1.1 Business Reference Services

<http://www.loc.gov/rr/business/index1.html> : In the Business Reference Services all major business subjects are covered, including industry information, commerce, statistics, banking, insurance, economics, finance, investment, marketing, and more. This URL consist Guide to finding business Information at the Library of Congress, specialized Business guides, subscription databases for business and economics research, subject guides to internet resources business reference collection, special collections of US and foreign industrial directories and federal government contracting etc.

5.1.2 Econlit

<http://www.aeaweb.org/econlit/index.php> : **Coverage: 1969 - Information Services:** EconLit, the American Economic Association's electronic database, is the world's foremost source of references to economic literature. The database contains more than 630,000 records covering 1969-present. It covers virtually every area related to economics.

5.3.3 ProQuest Banking Information Source

http://www.proquest.com/en-US/catalogs/databases/detail/pq_bankinginfo.shtml:

Coverage: 1971- **Some Full-Text:** It combines the currency of the Internet and the perspective of industry journals to provide the ultimate financial services research tool. With over 450 of the most authoritative sources of information, there is simply no better way to keep informed.

5.2 BIBLIOGRAPHIC DATABASES

5.2.1 Current Contents Connect

http://thomsonreuters.com/products_services/scientific/Current_Contents_Connect

Coverage: 1998- **Index:** It contains records from over 8,000 of the world's leading scholarly journals and more than 2,000 books in the sciences, social sciences and arts and humanities. It is updating daily.

5.2.2 Bibliography of Asian Studies

<http://quod.lib.umich.edu/b/bas/>: **Coverage:** 1971- **Index.** It provides access to principally western-language articles and book chapters on all subjects (but especially the humanities and the social sciences) relating to all parts of Asia.

5.2.3 ISI Web of Science

<http://wok.mimas.ac.uk/>: **Coverage:** 1987- **Index :** It includes approximately 8,500 journals combining science citation, social sciences citation and arts & humanities citation indexes. Allows keyword, author, title, author's address and cited reference searching.

5.2.4 Recent Advances in Manufacturing

<http://www.libraries.uc.edu/libraries/engr/selfhelp/ram.html>: **Coverage:** 1990- **Index** It is a database of bibliographic information for manufacturing and related areas. It covers over 500 niche and mainstream journals and magazines, and also details of books, videos and conference proceedings.

5.2.5 Population Index

<http://popindex.princeton.edu/>: **Coverage:** 1986-2000, **Index:** It is a searchable database containing 46,035 abstracts from books, journal articles, and working papers of demographic literature etc. It is published in population index in the period 1986-2000.

5.2.6 PsycINFO

<http://www.apa.org/psycinfo/>: **Coverage:** 1800-, **Abstract:** It is an abstract (not full-text) database of psychological literature from the 1800s to the present. It combines a wealth of content with precise indexing. It contains bibliographic citations, abstracts and cited references.

5.3 FULL TEXT DATABASES

5.3.1 ABI/INFORM Trade and Industry

http://www.proquest.com/en-US/catalogs/databases/detail/abi_inform_trade.shtml

Coverage: 1971-, Some Full-Text : It covers 750 business periodicals and newsletters with a trade or industry focus in every major industry. It provides access to the latest industry news, product and competitive information, marketing trends, etc.

5.3.2 Asia-Studies Full-Text Online

<http://www.asia-studies.com/>: Asia-Studies Full-text Online is the premier database for the study of modern Asia Pacific. It brings together thousands of full-text reports covering 55 countries on a multitude of business, government, economic, and social issues.

5.3.3 Business Beacon

<http://www.business-beacon.com/>: The Business Beacon is a comprehensive time-series database on the Indian economy. It brings to you 9,808 economic indicators in upto six frequencies. It covers population and demography, national income statistics, public finance, money & banking, agriculture, industry, prices, energy, transport, capital markets, investment trends, foreign trade & the external sector, tourism, health, education and employment areas.

5.3.4 Business and Industry

<http://rave.ohiolink.edu/databases/login/bsin> : Coverage: 1994-,Some Full-Text: It is a broad-based business information database that focuses on facts, figures, events and market information about companies, industries, products and markets. It covers all industries and is international in scope.

5.3.5 Business and Management Practices

<http://library.dialog.com/bluesheets/html/bl0013.html>: Some Full-Text : This database contains information dealing with the processes, methods, and strategies of managing a business. BAMP coverage focuses on those source publications that deal with management issues or business methodology from a practical approach. The database includes abstracts and full text of articles.

5.3.6 Business Source Premier

<http://www.ebscohost.com/titleLists/bu-complete.htm>: Coverage: 1922-, Some Full-Text : It is a comprehensive database which contains index and abstracts for more than 10,184 business-related periodicals. It also includes the research community's business thesaurus as well as searchable citations for more than 1,100 academic journals. In addition, this database provides full text for more than 3,000 periodicals, including nearly 1,000 full text peer-reviewed journals.

5.3.7 Capitaline Plus

<http://www.capitaline.com/new/index.asp>: It is a corporate database on listed and unlisted Indian companies. It provides Information on more than 10,000 companies with their financial and non-financial information with company query, industry, finance, and score board & projections models. It incorporates the state of the art facilities like, graphics currency conversion forecasters, multimedia and web-link.

5.3.8 CRISINFAC

<http://www.crisil.com/index.jsp>: CRISINFAC Industry Information Service presents a detailed and comprehensive analysis of the current trends and the long-term performance outlook on 41 industries in India. It includes the evolution of an industry, the regulatory environment, cost structures, nature and extent of competition, global trends along with statistical information on capacities, production, imports-exports, domestic and international prices and consumption patterns. This information is updated on a regular basis and the 3-5 years long term outlook is updated on an annual basis.

5.3.9 CapEx

<http://www.cmie.com/database/?service=database-products/firm-level-data-services/capex-investment-project.htm>: It covers investment projects in mining, manufacturing, electricity and infrastructure and services sectors. It also covers over 7,000 projects at any point in time and the order of magnitude of the investments envisaged in these projects add up to about Rs.8,00,000 crore. The precise numbers keep changing as new projects get added and the ones that got commissioned get excluded. It highlights the distribution of overall investments by industry, region and ownership.

5.3.10 EBSCO Megafile Premier

<http://www.newcastle.edu.au/service/library/database/megafile.html>: **Some Full-Text** : It is a collection of some 22 databases covering all subject areas. Users can search a single database click on the database name. To search more than one database check the boxes next to the database names and click continue.

5.3.11 First Source

<http://www.firstsource.com/>: First Source is the largest database on the financials of companies registered in India. It is packed with financial information compiled from the audited annual accounts of over 300,000 companies registered with the Registrar of Companies. The database has been created by CMIE in collaboration with the Ministry of Company Affairs.

5.3.12 GMID

<https://www.euromonitor.com/WALogin/WALogin.aspx?Web=GMIDv3>: **Full-Text, Login required**: The Global Market Information Database (GMID) provides key business intelligence on countries, companies, markets and consumers. It is an integrated on-line information system covering over 350 markets and 207 countries.

5.3.13 ISI Emerging Markets

<http://www.library.hbs.edu/go/ISI.html>: ISI Emerging Markets offers depth information on emerging market business and financial information, with the Internet as its primary distribution channel's Emerging Markets has exhaustive country products on 35 emerging markets. The online service provides comprehensive coverage of significant local and international information across 39 developing markets. Data and information involve updates on a daily basis under the categories like News, Company, Industry, Financial Markets, Legal & current Affairs.

5.3.14 Indiastat.com

<http://www.indiastat.com/>: Indiastat.com is an online socio-economic database brought out by Datanet India Private Limited, New Delhi. The data has been compiled under 30 classifications with further categories. The site provides the user with an Online Bookstore with over 40000 titles apart from general information about India, a Resource Directory comprising of researched commercial database with lakhs of records, statistical data covering all parameters of Socio-economics, links of sites in India and abroad etc,

5.3.15 India Trades

<http://www.cmie.com/database/?service=database-products/sectoral-services/india-trades.htm>: India Trades presents India's official foreign trade statistics and related data in a user-friendly and software-enabled database. India exports and imports about 10,000 commodities to and from nearly 200 countries/regions. India Trades provides you with monthly statistics on this trade. The database provides quantity, value and unit value in respect of each of products exported or imported. The monthly time-series is available for upto ten years. Annual series is available for about 15 years.

5.3.16 Insight - <http://www.insight.com/site/index.cfm>: Asian CERC has extremely sophisticated mechanisms that it deploys to digitize documents and to catalogue them electronically for easy deployment over the web. It brings you in-depth, un-biased perspectives to various industries by making available to us. It also brings international Indices covering all the major markets namely American, European, Asia-Pacific, African-Middle East giving you updated movements from the world over.

5.3.17 IBID (India Business Insight Database)

<http://www.bharatbook.com/general/India-Business-Insight-Database-IBID.asp>

Coverage 1993- : Available from 1993 IBID compiles and consolidates vital information on Indian business and industry from over 40 plus newspapers and business magazines. The data is updated on CD every quarterly and weekly on internet.

5.3.18 MAGINDIA

<http://magindia.com/> : At present, it has 2 lakh ads of various brands spanning over 10 years across different product categories in its physical archive. There are more

than 45,000 agency creative (across 550 plus product categories and 2000 plus brands) available online. In addition, there's the whole collection of Mudra ads since its inception in 1980.

5.3.19 Proquest Asian Business and Reference

http://www.proquest.com/en/catalogs/databases/detail/pq_asian_business.shtml:

Coverage: 1971-, Some Full-Text: It covers Asian business and financial information from key international publications. It provides information on companies, economies, markets, and business conditions throughout the Eastern Hemisphere. It includes much information on international trade.

5.3.20 Proquest European Business

<http://www.worthingtonlibraries.org/research/databases/proquest-european-business>:

Coverage: 1971-, Some Full-Text: It includes in-depth profiles of the continent's companies, business leaders, and products, as well as information on specific economic and market conditions in countries and regions throughout Europe.

5.3.21 PROWESS

<http://www.prowess.com/> : Coverage 1995: PROWESS is a corporate database available from 1995 on India's medium and larger companies designed for assisting researching companies and industries. The database contains information on over 7000 companies. The coverage includes public, private, cooperatives and joint sector companies. Apart from Annual Accounts of companies in India, it provides information from scores of others reliable source such as the stock exchanges, associations, etc. The coverage also includes the funds flows based on these, half yearly results, products and plans, raw materials, history of capital changes, bonus and dividends, stock prices and related information, expansion plans, etc.

5.3.22 Snapshots Asia Pacific

<http://www.text100.com/en/media/thought-leadership/international-market-snapshot-asia-pacific>:

Coverage: 2001-, Full-Text: It covers over 600 reports prepared by the market research company Snapshots International Ltd which provide an overview of the Asia-Pacific region.

5.3.23 UNESCO Documents and Publications

<http://unesdoc.unesco.org/ulis/>: Coverage varies,Some Full-Text: It contains bibliographic records and full-text of UNESCO documents, publications (full-text of out-of-print documents only) and journals; bibliographic records of the UNESCO Library's acquisitions.

5.2.24 United Nations Treaty Series

<http://untreaty.un.org/>: Coverage: 1946-2002, Full-Text: It contains treaties and international agreements registered or filed with the Secretariat of the U.N. since 1946. Texts are in their authentic language(s), along with translations into English and French, as appropriate.

5.2.25 WDI Online (World Development Indicators - World Bank)

<http://publications.worldbank.org/WDI/>: **Coverage:** 1960-, **Full-Text:** It contains statistical data for over 550 development indicators and time series data from 1960-2005 for over 200 countries and 18 country groups. Data includes social, economic, financial, natural resources, and environmental indicators.

5.4 ON LINE JOURNALS

5.4.1 ABI/INFORM Global (Business Periodicals on Disc)

http://www.proquest.com/en-US/catalogs/databases/detail/abi_inform_global.shtml: **Coverage:** 1971-, **Some Full-Text:** The database has in-depth coverage of business and economic conditions, management techniques, theory and practice of business, advertising, marketing, economics, human resources, finance, taxation, computers, company information, and business and executive profiles. It consists of 1800 full-text journals (Back files from 1971-present) and 2000 journals that are indexed and abstracted. The resource is offered on Web with CD ROM backup.

5.4.2 Cambridge Journals Online

<http://journals.cambridge.org/action/login;jsessionid=70DE5DD4B06BC2415E1E12E7514EA8F1.tomcat1>: **Coverage varies,** **Full-Text:** It is full text of journals published by Cambridge University Press. It includes over 100 journals in sciences, social sciences and humanities. Users can register to save searches, receive alerts to articles and tables of contents for journals of interest.

5.4.3 Elsevier ScienceDirect

http://www.elsevier.com/wps/find/electronicproductdescription.cws_home/622109/description#description: **1995- Full-Text:** Access the full-text of over 1500 Elsevier journals primarily in the Sciences, but including Business, Education, Linguistics, Management, Sociology, etc. Users may register and create their own account allowing use of personalization and alert services.

5.4.4 Emerald Management Xtra

<http://info.emeraldinsight.com/products/xtra/index.htm?PHPSESSID>: **Coverage: Abstracts 1988- ,Full-Text 1994- :** It provides access to the full-text of 149 journals and reviews from a further 300 in the fields of management, librarianship, engineering and computer science.

5.4.5 InfoSci Journals

<http://www.infosci-journals.com/> : InfoSci Journals (formerly IGI Full-Text Online Journal Collection) is a package for academic and public libraries, which offers electronic access to all journals published by IGI Global in one easy-to-use online format. It is an extensive, academic, online full-text journal database, which provides libraries access to hundreds of journal articles from IGI Global's collection of over 30 journals. Currently there are over 2,000 research articles available, each focusing on

the latest research in IT, and are represented from 2000 until the present time and new articles are consistently added each quarter.

5.4.6 Ingenta Connect

<http://www.ingentaconnect.com/content>: Coverage varies, Some Full-Text: It is a collection of academic and professional journals with full-text access to a limited number of journals to which the Library subscribes. It combines the former Ingenta Journals and Ingenta Select.

5.4.5 JSTOR

<http://www.jstor.org/>: Coverage varies, Full-Text: It access to archival issues of journals with coverage usually ending three to five years before present. Back issues of over 600 journals in the arts, humanities, and social sciences are available with links to current issues available in Project Muse. JSTOR offers researchers the ability to retrieve high-resolution, scanned images of journal issues and pages as they were originally designed, printed, and illustrated.

5.3.6 Oxford Journals

<http://www.oxfordjournals.org/>: Coverage varies, Full-text: It is full-text of journals published by Oxford University Press. Users can browse journals title by title or search across the entire online collection.

5.3.7 Project Muse

<http://muse.jhu.edu/>: Coverage varies. Full-Text: It includes nearly 250 journals from 40 scholarly publishers covering the fields of literature and criticism, history, the visual and performing arts, cultural studies, education, political science, gender studies, economics, and many others.

5.3.8 Proquest 5000 International

<http://www.lib.cas.cz/en/online-database/proquest-5000-international>
Coverage: 1971-, Some Full-Text: A collection of databases which, when searched together, provides information on all subject areas. Contains millions of full-text articles, abstracts and indexes from over 5,500 journals, newspapers etc.

5.3.9 RePEc: Research Papers in Economics

<http://repec.org/>: Some Full-Text: A collaborative effort of volunteers in 44 countries to enhance the dissemination of research in economics, It is a decentralized database of working papers, journal articles (full-text only available if UoW subscribes) and software components.

5.3.10 Management & Organization Studies: A SAGE Full-Text Collection

<http://online.sagepub.com/collection.dtl?coll=MGMT>

Coverage 1999- , Full-Text: It covers 40 peer- reviewed journals up to 60 years of back file on communication studies, criminology, education, health sciences, management

& organization studies, materials science, political science, psychology, sociology and urban studies & planning etc.

5.3.11 Taylor & Francis Journals

<http://www.tandf.co.uk/journals/>: Coverage varies, Full-Text: User can Access to the full-text of over 1200 journals in all subjects published by Taylor & Francis.

5.3.12 Wiley InterScience Journals

<http://www3.interscience.wiley.com/browse/?subject=BUSI>

Coverage: 1997-, Full-Text: Users can access to the full-text of Wiley published journals in the fields of. accounting, business(general), economics, finance and investments, industrial and labour relations, management, marketing and sales, non-profit organizations, public administration and management, risk management and insurance, training and human resource development.

5.5 OPEN ACCESS JOURNALS

5.5.1 Directory of Open Access Journals

<http://www.doaj.org/doaj?func=subject&cpid=17>: This service covers free, full text, quality controlled scientific and scholarly journals. It aims to cover all subjects and languages. There are now 3895 journals in the directory. Currently 138 free and full text journals on business and economics journals are searchable at article level.

5.6 CONSORTIA

5.6.1 JCCC@INDEST - <http://jccc-indest.informindia.co.in/>: J-Gate Custom Content for Consortia, is a customized solution for accessing and sharing journal literature subscribed by all the IITs, IISc and IIMs, individually and collectively through INDEST Consortium. JCCC@INDEST is a common gateway to access 4,252 e-Journals from 1,028 publishers, subscribed by IITs, IISc, IIMs (15 Libraries). The journals of following INDEST Consortium registered publishers are included in JCCC@INDEST
· ACM Digital Libraries, American Society of Civil Engineers (ASCE), American Society of Mechanical Engineers (ASME), IEEE Electronic Library Nature, Science Direct (Elsevier), Springer-Link

5.7 E-BOOKS

5.7.1 Ebrary : <http://www.ebrary.com/corp/>: Coverage varies, Full-Text: Users can access over 24,000 book titles from 180+ publishers. Users need to download ebrary reader software and may create an optional ebrary account to save book links, bookmarks within a book, annotate pages, and highlight specific passages for later reference.

5.7.2 EBooks : <http://www.ebooks.com/subjects/business/>

Coverage varies, Full-Text: Ebrary offer a unique set of online e books, which combines close to 60,000 online authoritative books and other documents from over 200 leading academic, trade and professional publishers.

5.7.3 Safari Tech Books Online

<http://www.hotfrog.in/Companies/Safari-Books-Online>: **Coverage:** **Current editions. Full-Text:** Users can access and search around 90 e-books in the fields of computer science programming and management. Only three simultaneous logins are permitted. Select 'My Bookshelf', then 'go', to view available titles.

5.8 THESES & DISSERTATIONS

5.18.1 ProQuest Theses & Dissertations [Digital Dissertations]

<http://www.proquest.com/en-US/products/dissertations/>

Coverage 1861- : Digital Dissertations is now available on the ProQuest platform, with a new name ProQuest Dissertations & Theses (PQDT). Index of 2.5 million doctoral dissertations and masters' theses from universities worldwide, especially from North America. Indexed from 1861, abstracts from 1980, and 750,000 full-text theses from 1996.

5.9 BUSINESS AND MANAGEMENT DIRECTORIES

5.9.1 Cabells Directories Online

<http://www.cabells.com/>: **Directory:** It provides current information on the contact information, publication guidelines and review information and circulation data for a large number of journals in the subject fields. It also covers accounting; economics and finance; management and marketing.

5.9.2 Kompass : <http://www.kompassindia.com/>

Coverage: Current Edition. Directory: It contains information on over 1.8 million companies worldwide. It can be searched by Products & services, company name, trade name, and executives. Searches may be further refined by region. Only one simultaneous user allowed.

5.9.3 O*Net Online : <http://online.onetcenter.org/>

Directory: It is provided by the US Dept. of Labor. It includes detailed information on over 950 occupations, detailing skills, abilities, tasks, knowledge, work activities, experience levels required etc.

5.9.4 UBD Online : <http://www.ubd.com.au/>

UBD is at the forefront of the mapping industry and is Australia's leading brand in street directories. Along with the yearly publication of six capital city street directories, UBD also publishes numerous regional and country cities and towns street directories.

5.9.5 Ulrich's Periodicals Directory: www.ulrichsweb.com

Coverage: Current Information: A bibliographic database providing information on serials published throughout the world. It covers all subjects, and includes

publications that are published regularly or irregularly and are circulated free of charge or by paid subscription.

5.10 MAGAZINE & BUSINESS NEWSPAPERS

5.10.1 Factiva : <http://factiva.com/factiva/factiva.asp>

Coverage varies. Full-Text: Search newspapers, journals, newswires, media programme transcripts, pictures, and company background data extending back over 25 years in this global news and information service. Only three simultaneous logins are permitted.

5.10.2 Indian Business News. :

<http://inwww.rediff.com/newshound/business.html>: Coverage: varies, Some Full-Text: It covers 1000 Indian *news* sources/websites and provides latest Indian *business news* from *news* sources like *Business Line*.

5.10.3 IBID (India Business Insight Database)

<http://www.bharatbook.com/general/India-Business-Insight-Database-IBID.asp>

Coverage 1993- : India Business Insight Database - IBID, a product of Informatics (India) Ltd. It is available from 1993 IBID compiles and consolidates vital information on Indian business and industry from over 40 plus newspapers and business magazines. The data is updated on CD every quarterly and weekly on internet.

5.11 DIGITAL LIBRARY

5.11.1 ACM Digital Library

<http://portal.acm.org/dl.cfm>: Coverage: 1947- Some Full-Text: The ACM Digital Library incorporates digital versions of works published by ACM since its inception. The major components of the resource is an enhanced version of the ACM Digital Library plus an extended bibliographic database, consisting of more than a quarter-million citations of core works in computing. The ACM Digital Library hosts over 103,000 full-text articles from ACM journals, magazines, and conference proceedings and half million bibliographic Records with about 2,50,000 links to full bibliographic information and 70,000 further links to full text resources. The access is for 32 Full text journals +Conference proceedings+ others.

5.11.2 Times Digital Archive

<http://www.rbkc.gov.uk/libraries/referenceandinformation/timesdigitalarchive.asp>

Coverage: 1785-1985. Full-Text: The complete digital edition of the Times (London) can be searched and full images of either a specific article or a complete page retrieved. The entire newspaper has been captured, including all articles, advertisements and illustrations/photographs.

5.11.3 Free Management Library

<http://www.managementhelp.org/>: The Library provides easy-to-access, clutter-free, comprehensive resources regarding the leadership and management of yourself, other individuals, groups and organizations. Content is relevant to the vast majority of people, whether they are in large or small for-profit or nonprofit organizations. Over the past 10 years, the Library has grown to be one of the world's largest well-organized collections of these types of resources. There are approximately 650 topics in the Library, spanning 5,000 links. Topics include the most important practices to start, develop, operate, evaluate and resolve problems in for-profit and nonprofit organizations. Each topic has additionally recommended books and related Library topics.

5.12 BUSINESS AND MANAGEMENT ONLINE DICTIONARIES

A remarkable selection of Business Dictionaries covering business terms from a wide range of professional fields, such as marketing, real estate, finance & investments and banking.

5.12.1 Campbell R. Harvey's Hyper textual Finance Glossary

<http://www.babylon.com/dictionary/2436/Campbell-R.-Harvey's-Hypertextual-Finance-Glossary.html>

5.12.2 BTS Transportation Expressions

<http://www.babylon.com/dictionary/51100/BTS-Transportation-Expressions.html>

5.12.3 Raynet Business & Marketing Glossary

<http://www.babylon.com/dictionary/6002/Raynet-Business-Marketing-Glossary.html>

5.12.4 A Guide to Futures and Options Market Terminology : English-English

<http://www.babylon.com/dictionary/4002/A-Guide-to-Futures-and-Options-Market-Terminology:-English-English.html>

5.12.5 BEA Economic Analysis Glossary

<http://www.babylon.com/dictionary/54482/BEA-Economic-Analysis-Glossary.html>

5.12.6 UNODC Money-Laundering Terms

<http://www.babylon.com/dictionary/50545/UNODC-Money-.html>

5.12.7 Bureau of Labor Statistics Glossary

www.babylon.com/dictionary/48157/Bureau-of-Labor-Statistics-Glossary.html

5.12.8 European Central Bank Glossary

<http://www.babylon.com/dictionary/51119/European-Central-Bank-Glossary.html>

5.12 SUBJECT SEARCH ENGINES & INFORMATION GATEWAYS

5.12.1 Subject Search Engines

AccountingWeb : <http://www.accountingweb.co.uk/> : This has a well structured list of Web sites, including links to full-text accountancy journals. The site operates a search engine designed to only search Internet sites to UK accounting professionals.

Biz/ed : <http://bized.ac.uk/> : It is a searchable business resource for students, teachers and lecturers that includes an internet catalogue, learning material, business data and company facts. A dedicated business and economics information gateway for HE.

BUBL : <http://bubl.ac.uk/> : The BUBL Information Service, based at Strathclyde University provides access to selected Internet resources. Searches by keyword, Dewey class number and subject are available including the new BUBL 5:15 service.

UK Plus : <http://www.bnet.co.uk/> : Search engine organised by subject including an editorial review of each site.

5.12.2 Internet Gateways

BUBL Subject Tree – Business & Management

<http://www.highbeam.com/Search.aspx?q=business/management:> BUBL Information Service introduced the BUBL Subject Tree in 1993. It is a current awareness service that is updated each week. It can be accessed by Gopher and the World Wide Web. It provides subject access to Internet resources and services.

Resource Discovery Network

<http://www.intute.ac.uk/>: The Resource Discovery Network is a co-operative network of Internet resource catalogues providing access to descriptions of quality resources. The site allows cross searching over all of the catalogues and as such is a very useful

6.0 CONCLUSION

In URL's world, so many web sites available on business and management sciences. It is impossible for any user to get the information in the shortest possible time. The URLs of selected web resources mentioned in this paper will help in location in business & management related information for management professionals. This paper makes an effort to identify & list the imperative web resources on business & management sciences which are helpful in learning, teaching and research activities of management institutions.

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1. Ray, Prytherch. (2005) Harrod's Librarians' glossary and reference book: a dictionary of over 10,200 terms organizations, projects and acronyms in information management, library science, publishing and archive management. Ed.10, Burlington, Ashgate Publishing Company, p.735.
2. <http://www.enotes.com/public-health-encyclopedia/information-technology>

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